TIME's Teleſcope

Univerſal and Perpetual,

Fitted for all Countries and Capacities.

CONTAINING

Perpetual TABLES, fitted to the Old and New Stile; ſhewing the Moveable and Fixed Feaſts, the Riſing and Setting of the Sun and Moon; and how to find the Moon's Place at any time propoſed: Alſo the Changes and Eclipſes calculated for Thirty Years; with Rules to find them for ever, according to the middle Motion of the Sun and Moon.

ALSO

The Magnitudes and Diſtances of the PLANETS;

AND

A Brief Diſcourſe of all kinds of Meteors, or Appearances in the Heavens; Natural Prognoſticks of the Weather: With a General View of the Four Parts of the World.

To the Whole is Added,

A Short Deſcription of TIME and how it ought to be Redeem'd.

DUNCAN CAMPBELL.

LONDON,

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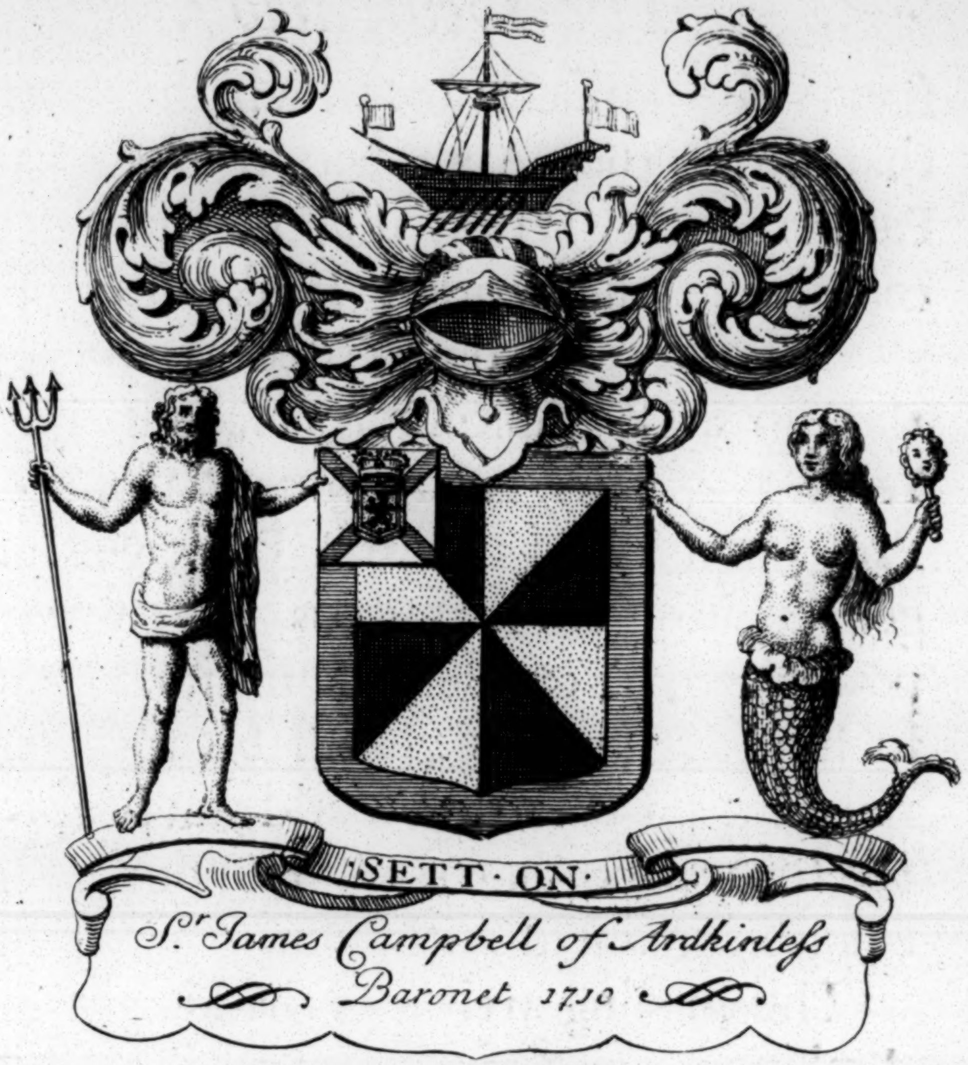
SETT · ON ·
Sr. James Campbell of Ardkinleſs
Baronet 1710

To the Honourable

Sir JAMES CAMPBELL,

of Ardkinleſs, *Baronet ; And Member of the Honourable Houſe of Commons.*

Honoured Sir,

AS it is cuſtomary for Authors, to dedicate the Products of their Studies, to one whoſe Name is dear to themſelves, Venerable to the Publick ; or one who well under-ſtands the Subject on which they write, that thro' the Approbation of a Learned Patron their Works may be the more acceptable to the World: I, likewiſe (having all theſe Views complicated in one) with the greateſt ſubmiſſion recommend this *Teleſcope of Time*, Sir, to your Patronage and Protection. And tho' this Book was of leſs general uſe than it really is, I'm thoroughly perſwaded, Your Name in its Front, is ſuch an Ornament as will be ſufficient to recommend it to the World; and eſpecially to thoſe who have the Honour, Sir, of being acquainted with you.

Thus having arriv'd at the Height of my Ambition (an Opportunity of ſhewing my Gratitude for Favours already received) I ſubſcribe myſelf, with great Pleaſure, and profound Humility,

SIR,

Your Honour's Moſt Dutiful,

Moſt Obedient, and

Moſt Obliged Humble Servant,

Duncan Campbell.

THE

PREFACE.

Reader,

I Acknowledge my ſelf much oblig'd to you for fixing your Eye to this *Teleſcope*: I hope, the Proſpect it produces, will anſwer your Expectation; for it will repreſent to your View, Things Viſible and Inviſible! At the Diſtance of Millions of Miles, and Thouſands of Years! It will plainly ſhew you the dark Receſſes of Time and Diſtances; which is more than any other Teleſcope pretends to. You cannot furniſh your Family with an Inſtrument that will be of more daily and yearly uſe to your ſelf and Poſterity than this: For we muſt allow, that the true Knowledge of Time is indiſpenſibly neceſſary for Mortals, whoſe Lives are nothing elſe but uncertain Members of that precarious Being. And this Knowledge is attained to, by the Motion and Revolutions of the Celeſtial Bodies; eſpecially, by that of the Sun and Moon, and of the Earth it ſelf. [*See* Gen. 1, and 14.] Therefore I recommend this Teleſcope to thoſe who are ſhort-ſighted in Aſtronomy: It will give them a clear View of theſe Motions, on which Time depends; and conſequently of Time it ſelf.

The meaneſt Reader need not deſpair of underſtanding the obſcureſt Paſſage in this Book, if he does but carefully and patiently peruſe it once or twice over: For all the Tables are ſo fully explained, and ſo many Examples given, that a School-Boy, who is entirely a Stranger to Aſtronomical Books, may readily underſtand it. But it is a great fault in ſome People, to hurry over the Explanations of ſuch Books as this, without ever turning to the Tables, to which they refer; and conſequently they loſe the Pleaſure and Profit of comprehending what they read

If they look in a Book, and happen to meet with a Paragraph that is not wrote in their Stile, they are apt to accuſe the Author of Obſcurity, or themſelves of want of Underſtanding; or (which is worſe) blame their Parents for not giving them a liberal Education.

Therefore, I adviſe the Learner to read one Example over, and then look in the Table to which that directs, and try if it anſwers: If it does not, he muſt ponder it over, till he brings it to bear.

But when once you make the Tables familiar to you, you may proceed with Eaſe and Pleaſure, without the Trouble of reading the Explanations.

Firſt, Learn the Uſe of theſe Tables that are moſt neceſſary, namely, thoſe ſhewing the Day of the Month, and Day of the Week, the Moveable Feaſts, the Riſing and Setting of the Sun and Moon, the Changes and Eclipſes, the Tyde-Table, *&c.*

Reader, *Yours*, &c.

D. C.

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The Explanation of the Two following TABLES.

IN the firſt Table, Page 4. look for the Year on the Left Hand, and in that one Line to the Right, and under the Months, you have your Deſire.

Example 1. I would know, what Day of the Week begins every Month in the Year 1734? Having found the Year in the firſt Column, I find againſt it under *Jan. Tueſday,* under *Feb. Friday, March* and *Nov Friday*; and under *April* and *July, Monday*; *May, Wedneſday*; *June, Saturday*; *Aug. Thurſday*; *Octob. Tueſday*; *Septemb.* and *Decemb. Sunday.*

Example 2. The Year 1832. From the Year, guide your Eye to the Right; there you find *L.* ſignifying Leap-Year: And againſt *L.* 21, the Cycle of the Sun; and in the ſame Line, forward, you find the firſt day of every Month in the Year; for *Jan Friday, Feb. Monday,* &c.

Example 3. Let it be requir'd to know, what day of the Week begun every Month in the Year 1700? To find this, I muſt look for the Cycle of the Sun in the Table, Page 7; which I find to be 1, for the ſaid Year. Now, I ſeek for 1 in this Table, in the Column, titled *Cycle of the Sun*; and having found it, I find againſt it, for *Jan. Monday, Feb. Thurſday,* and ſo thro'. Here you ſee, you have nothing to do, but to find the Year, or the Cycle of the Sun for any Year propos'd, in the ſide, the Month at the top; and in the Angle, or Place of meeting, you have the Day that the Month begins on.

Example 4. The Year 1904, Cycle of the Sun 9. I enter the Table with that Number: To the Right I find *Thurſday, Sunday, Monday,* &c.

* * *

The Explanation of the ſecond Table.

THis Table is divided into ſeven ſquares, or ſmall Tables for the 7 Days of the Week; and each ſquare begins with a red Day, or firſt day of the Month. *Example* 1. I deſire to know, what day of the Week, any day of *Jan.* falls in the Year 1734. By the preceding Table I find, *Tueſday* is the firſt day of *Jan.* I look for *Tueſday* in this Table, and I ſee it begins the third ſquare on the Left Hand; and againſt it, 1-8-15-22-29, all *Tueſdays*; againſt *Wedneſday*, 2-9-16-23-30, which are all the *Wedneſdays* in *January*; and again, I would know, what day of the Month the third *Friday* in *January* is? I ſeek for *Friday* in that ſquare, and againſt it I find 4-11-18-25, and 18 anſwers the Queſtion, *3d Friday*. And I would know, what day of the Week is the *27th* day? I look for 27 in the ſquare; againſt it, on the Left, I find *Sunday*; and all the Numbers in that Line are *Sundays*. If it be required, What day of the Week begins the *Gregorian* or *Roman* Month, you muſt in this Caſe ſee what Day of the Week is the 4th of the *Julian* or *Britiſh* Month; and that Day begins the *Roman* Month, till the Year 1800; from 1800 till 1900, the *3d*; from 1900 till 2100, the *2d*; from 2100 till 2200, the ſame Day of the Week that begins our Month, begins theirs alſo: For the firſt of ours will be then equal to the 15th of theirs (the ſame Day of the Week, 1 and 15.)

Of the Roman *Day of the Month.*

BY the foregoing Rules, find what day of the Week is the 4th of the *Britiſh* Month, and that is the *1ſt* of the *Roman* Month, as I have hinted before. For Example; the 4th day of *Jan.* in the Year 1734, is *Friday*: Now I ſeek for the ſquare in the *2d* Table, that begins with *Friday*; and having found it, againſt it to the Right Hand, I have all the *Fridays* in the Month; in the ſecond Line, all the *Saturdays*; in the third, all the *Sundays*, and ſo on. Obſerve, that in each of theſe ſquares you have from 1 to 31, the higheſt Number of Days in any Month: ſo that you are to mind the Number of Days in the Month you reckon in; you'll find every Month's Number of Days ſet down along with it in the firſt Table. Note, when theſe Years are expir'd, that the Reader may cut them off.

Mind th' Explanation of each Table,
To underſtand them, that will make you able.
They're plain and obvious to the Learner's View,
Who my Directions willingly purſue.

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A Table *ſhewing the Firſt Day of the Month for eve*

The Year of Chriſt, Our Prophet, King, and Prieſt. Let his Name be ador'd: For of all he is Lord.				*L. for Leap-Year*	*Cycle of the Sun*	Jan. has 31 days.	Feb. 28 or 29 days	Mar. 31 Nov. 30	Apr. 30 July 31	May has 31 Days	June has 30 Days	Aug. has 31 days	Oct. has 31 days.	Sep 30 Dec 31
1734	1762	1790	1818		7	*tueſd*	*frid.*	*frid.*	*mond*	*wedn*	*ſatur*	*thur*	*tueſ.*	*ſund*
1735	1763	1791	1819		8	*wedn*	*ſatur*	*ſatur*	*tueſd*	*thur*	*ſund*	*frid.*	*wedn*	*mon*
1736	1764	1792	1820	*L.*	9	*thurſ*	*ſund*	*mond*	*thurſ*	*ſatur*	*tueſd*	*ſund*	*frid.*	*wed*
1737	1765	1793	1821		10	*ſatur*	*tueſd*	*tueſd*	*frid.*	*ſund*	*wedn*	*mond*	*ſatur*	*thu*
1738	1766	1794	1822		11	*ſund.*	*wed.*	*wedn*	*ſatur*	*mond*	*thurſ*	*tueſd*	*ſund*	*frid.*
1739	1767	1795	1823		12	*mond*	*thur.*	*thur.*	*ſund*	*tueſd*	*frid.*	*wedn*	*mond*	*ſatu*
1740	1768	1796	1824	*L.*	13	*tueſ.*	*frid.*	*ſatur*	*tueſd*	*thur*	*ſund*	*frid.*	*wedn*	*mon*
1741	1769	1797	1825		14	*thurſ*	*ſund*	*ſund*	*wedn*	*frid*	*mond*	*ſatur*	*thurſ*	*tueſ*
1742	1770	1798	1826		15	*frid.*	*mon*	*mond*	*thurſ*	*ſatur*	*tueſd*	*ſund.*	*frid*	*wed*
1743	1771	1899	1827		16	*ſatur*	*tueſ.*	*tueſd*	*frid.*	*ſund*	*wedn*	*mond*	*ſatur*	*thu*
1744	1772	1800	1828	*L.*	17	*ſund.*	*wedn*	*thur*	*ſuud.*	*tueſd*	*frid*	*wedn*	*mond*	*ſatu*
1745	1773	1801	1829		18	*tueſ.*	*frid.*	*frid.*	*mond*	*wedn*	*ſatur*	*thur*	*tueſ,*	*ſund*
1746	1774	1802	1830		19	*wed.*	*ſatur*	*ſatur*	*tueſd*	*thur*	*ſund*	*frid.*	*wedn*	*mon*
1747	1775	1803	1831		20	*thur.*	*ſund.*	*ſund.*	*wedn*	*frid.*	*mond*	*ſatur*	*thur*	*tueſ*
1748	1776	1804	1822	*L.*	21	*frid.*	*mond*	*tueſd*	*frid.*	*ſund*	*wedn*	*mond*	*ſatur*	*thu*
1749	1777	1805	1833		22	*ſund.*	*wedn*	*wedn*	*ſatur*	*mon*	*thurſ*	*tueſd*	*ſund*	*frid.*
1750	1778	1806			23	*mon.*	*thur.*	*thur*	*ſund*	*tueſd*	*frid*	*wedn*	*mond*	*ſatu*
1751	1779	1807			24	*tueſ*	*frid.*	*frid.*	*mond*	*wedn*	*ſatur*	*thur*	*tueſd*	*ſund*
1752	1780	1808		*L.*	25	*wed.*	*ſatur*	*ſund.*	*wedn*	*frid.*	*mond*	*ſatur*	*thur*	*tueſ*
1753	1781	1809			26	*frid.*	*mond*	*mond*	*thurſ*	*ſatur*	*tueſd*	*ſund*	*frid.*	*wed*
1754	1782	1810			27	*ſatur*	*tueſd*	*tueſd*	*frid.*	*ſund*	*wedn*	*mond*	*ſatur*	*thu*
1755	1783	1811			28	*ſund*	*wed.*	*wedn*	*ſatur*	*mond*	*thurſ*	*tueſd*	*ſund*	*frid.*
1756	1784	1812		*L.*	1	*mon.*	*thur*	*frid*	*mond*	*wedn*	*ſatur*	*thur*	*tueſ.*	*ſund*
1757	1785	1113			2	*wed.*	*ſatur*	*ſatur*	*tueſd*	*thurſ*	*ſund*	*frid.*	*wedn*	*mon*
1758	1786	1814			3	*thur.*	*ſund*	*ſund.*	*wedn*	*frid.*	*mond*	*ſatur*	*thur*	*tueſ*
1759	1787	1815			4	*frid.*	*mond*	*mond*	*thurſ*	*ſatur*	*tueſd*	*ſund.*	*frid.*	*wed*
1760	1788	1816		*L.*	5	*ſatur*	*tueſd*	*wedn*	*ſatur*	*mond*	*thur*	*tueſd*	*ſund.*	*frid.*
1761	1789	1817			6	*mon*	*thur.*	*thurſ*	*ſund*	*tueſd*	*frid*	*wedn*	*mond*	*ſatu*

Sunda

Sunday	1	8	15	22	29
Monday	2	9	16	23	30
Tueſday	3	10	17	24	31
Wedneſday	4	11	18	25	
Thurſday	5	12	19	26	
Friday	6	13	20	27	
Saturday	7	14	21	28	

Enter this Table with the Firſt Day of the Month, and in that Square you have your deſire at one View.

Monday	1	8	15	22	29
Tueſday	2	9	16	23	30
Wedneſday	3	10	17	24	31
Thurſday	4	11	18	25	
Friday	5	12	19	26	
Saturday	6	13	20	27	
Sunday	7	14	21	28	

Tueſday	1	8	15	22	29
Wedneſday	2	9	16	23	30
Thurſday	3	10	17	24	31
Friday	4	11	18	25	
Saturday	5	12	19	26	
Sunday	6	13	20	27	
Monday	7	14	21	28	

Wedneſday	1	8	15	22	29
Thurſday	2	9	16	23	30
Friday	3	10	17	24	31
Saturday	4	11	18	25	
Sunday	5	12	19	26	
Monday	6	13	20	27	
Tueſday	7	14	21	28	

Thurſday	1	8	15	22	29
Friday	2	9	16	23	30
Saturday	3	10	17	24	31
Sunday	4	11	18	25	
Monday	5	12	19	26	
Tueſday	6	13	20	27	
Wedneſday	7	14	21	28	

Friday	1	8	15	22	29
Saturday	2	9	16	23	30
Sunday	3	10	17	24	31
Monday	4	11	18	25	
Tueſday	5	12	19	26	
Wedneſday	6	13	20	27	
Thurſday	7	14	21	28	

Saturday	1	8	15	22	29
Sunday	2	9	16	23	30
Monday	3	10	17	24	31
Tueſday	4	11	18	25	
Wedneſday	5	12	19	26	
Thurſday	6	13	20	27	
Friday	7	14	21	28	

The Explanation of the following Table.

LOOK for the even Hundreds at the Top, and the Parts of an Hundred in the Left Side; and in the Place of meeting you have the Cycle of the Sun. Let it be requir'd, to find the Cycle of the Sun for the Year 1734? I look for 1700 at the Top, and for 34 in the Side. I find 1700 in the firſt Column for the Hundreds, and 34 in the ſecond Column for the odd Years; and in the Angle of Meeting, I find 7, the Cycle of the Sun for the ſaid Year .

Now, for the Dominical Letter for that Year, ſeek the Cycle of the Sun thus found, in the laſt Column but one on the Right in the Table; and againſt it, you have the Dominical Letter *F*.

Example 2. I deſire to know the Cycle of the Sun for the Year of Human Redemption 1700? I ſeek the Year from the Top; I find it in the firſt Column of Hundreds; and in the next Line beneath, and againſt the 0 in the Side, I find 1, the Number requir'd. Now I look for this Number 1 in that Column titled at Top, *(Cycle Sun,)* and againſt it I find G F; it being Leap-Year, G ſerves till the 24th of *February*, and F throughout the reſt of the Year.

Note, Till 1800, you have the Dominical Letter againſt the Year, on the Right Hand.

A Table *ſhewing the* Cycle *of the Sun, and the Dominical Letter, from the Year of our* Lord 1700, *to the Year* 4400, *and may be continu'd for ever,*

The odd Year is always found here.				3800 3100 2400 1700	3900 3200 2500 1800	4000 3300 2600 1900	4100 3400 2700 2000	4200 3500 2800 2100	4300 3600 2900 2200	4400 3700 3000 2300	*Cycle Sun.*	*Dom. Let.*
0	28	56	84	1	17	5	21	9	25	13	1	*G F*
1	29	57	85	2	18	6	22	10	26	14	2	*E*
2	30	58	86	3	19	7	23	11	27	15	3	*D*
3	31	59	87	4	20	8	24	12	28	16	4	*C*
4	32	60	88	5	21	9	25	13	1	17	5	*B A*
5	33	61	89	6	22	10	26	14	2	18	6	*G*
6	34	62	90	7	23	11	27	15	3	19	7	*F*
7	35	63	91	8	24	12	28	16	4	20	8	*E*
8	36	64	92	9	25	13	1	17	5	21	9	*D C*
9	37	65	93	10	26	14	2	18	6	22	10	*B*
10	38	66	94	11	27	15	3	19	7	23	11	*A*
11	39	67	95	12	28	16	4	20	8	24	12	*G*
12	40	68	96	13	1	17	5	21	9	25	13	*F E*
13	41	69	97	14	2	18	6	22	10	26	14	*D*
14	42	70	98	15	3	19	7	23	11	27	15	*C*
15	43	71	99	16	4	20	8	24	12	28	16	*B*
16	44	72		17	5	21	9	25	13	1	17	*A G*
17	45	73		18	6	22	10	26	14	2	18	*F*
18	46	74		19	7	23	11	27	15	3	19	*E*
19	47	75		20	8	24	12	28	16	4	20	D
20	48	76		21	9	25	13	1	17	5	21	C *B*
21	49	77		21	10	26	14	2	18	6	22	*A*
22	50	78		23	11	27	15	3	19	7	23	G
23	51	79		24	12	28	16	4	20	8	24	*F*
24	52	80		25	13	1	17	5	21	9	25	*E D*
25	53	81		26	14	2	18	6	22	10	26	G
26	54	82		27	15	3	19	7	23	11	27	*B*
27	55	83		28	16	4	20	8	24	12	28	*A*

POpe *Gregory* XIII. ſinding the *Julian* Account erroneous, reform'd it after the manner of this Table. The *Julian* Year conſiſts of 365 Days, Six Hours; which is 10 Minutes, 34 Seconds more than the real Tropical Year, conſiſting but of 365 Days, 5 Hours, 49 Minutes, 26 Seconds. Now theſe 10 Minutes 34 Seconds, from the firſt Year of the *Julian* Account (which took date before the Birth of Chriſt) to the Year 1600, amounted to 12 Days; and ſo many Days the *Julians* were too ſoon in reckoning the Vernal Equinox, and conſequently too late in reckoning their Month. The Pope looking back no farther than the Council of *Nice*, added 10 Days to his own Birth-day, *Oct.* 5. 1582, and call'd it the 15th; and by that means the Vernal Equinox fell on *Mar.* 21. This Reformation of the Calender is call'd the *Gregorian Account*, or New Stile We in *Great Britain* and *Ireland* ſtill follow the *Julian* Account, or Old Stile. Our Vernal Equinox falls now on the 10th of *March*, equal to their 21*ſt*; and will be on *Criſtmas-Day* the Year 10200, if the World endure ſo long, and the *Julian* Account go on without Correction. See the *Table*.

A Table *to reduce the* Julian *to the* Gregorian *Year.*

	Days added.	10
1600		10
1700		11
1800		12
1900		13
2000	Leap-Year.	13
2100		14
2200		15
2300		16
2400	Leap-Year.	16
2500		17
2600		18
2700		19
2800	Leap-Year,	19
2900		20
3000		21
3100		22
3200	Leap-Year,	22
3300		23
3400		24
3500		25
3600	Leap-Year,	25
3700		26
3800		27
3900		28
4000	Leap-Year,	28
4100		29
4200		30
4300		31
4400	Leap-Year,	31
4500		32
4600		33
4700		34

The

The Gregorian *Dominical Letter till the Year* 4400, *and may be continu'd for ever.*

The odd Year You'll find here.				3600	3700	3800	4000	4100	4200	4400
				3500	2800	2900	3900	3200	3300	4300
				2600	2700	2000	3000	3100	2400	3400
				1700	1800	1900	2100	2200	2300	2500
0	28	56	84	DC	FE	AG	CB	ED	GF	BA
1	29	57	85	B	D	F	A	G	E	G
2	30	58	86	A	C	E	G	B	D	F
3	31	59	87	G	B	D	F	A	C	E
4	32	60	88	FE	AG	CB	ED	GF	BA	DC
5	33	61	89	D	F	A	C	E	G	B
6	34	62	90	C	E	G	B	D	F	A
7	35	63	91	B	D	F	A	C	E	G
8	36	64	92	AG	CB	ED	GF	BA	DC	FE
9	37	65	93	F	A	C	E	G	B	D
10	38	66	94	E	G	B	D	F	A	C
11	39	67	95	D	F	A	C	E	G	B
12	40	68	96	CB	ED	GF	BA	DC	FE	AG
13	41	69	97	A	C	E	G	B	D	F
14	42	70	98	G	B	D	F	A	C	E
15	43	71	99	F	A	C	E	G	B	D
16	44	72		ED	GF	BA	DC	FE	AG	CB
17	45	73		C	E	G	B	D	F	A
18	46	74		B	D	F	A	C	E	G
19	47	75		A	C	E	G	B	D	F
20	48	76		GF	BA	DC	FE	AG	CB	ED
21	49	77		E	G	B	D	F	A	C
22	50	78		D	F	A	C	E	G	B
23	51	79		C	E	G	B	D	F	A
24	52	80		BA	DC	FE	AG	CB	ED	GF
25	53	81		G	B	D	F	A	C	E
26	54	82		F	A	C	E	G	B	D
27	55	83		E	G	B	D	F	A	G

OBſerve in the preceding Table, theſe even Hundreds here ſet down, are all Leap-Year in the *Gregorian* Account; 2000, 2400, 2800, 3200, 3600, 4000,4400. Leap-Years have two Dominical Letters, other Years but one.

Example for 1800. I look for 1800 from the Top, and in the firſt Line beneath; and againſt the o in the ſide I find *F E.* Now this being not a Leap-Year, I uſe *E* only, and take no notice of *F* and this Care is only to be taken in this upper-moſt Line in thoſe even Hundreds that are not Leap-Years. 1800, and 28-56-84 have the ſame Letters, in theſe Years; they are to be both taken in *F* till the 24*th* of *Feb.* and the other throughout the Year.

Example 2, for 1734. I look for 1700 at the Head of the Table; and I find it in the 1*ſt* Column for Hundreds, and I find 34 in the ſecond Column for Parts in the ſide, and in the Place of Meeting I find C the Dominical Letter.

Example 3, for 2000. Having found 2000 at the Head, I find in the firſt Line beneath *A G,* both to be uſed, it being Leap-Year.

Example 4. I wou'd know the Dominical Letter for 2100. In the firſt Line in that Column I find *C B*; B only to be uſed in 1799, *F* is the Letter, 1801; *D* is the Letter; 1904, *C B* the Letters.

The

THE following Table, by help of the Dominical Letter, ſhews the Day of the Week and Month for ever in both Accounts.

Example 1, for the *Britiſh* Account: I would know what day of the Week begins *January* the Year 1734? I look for the Dominical Letter in the Table, Page 7, and I find the Domin. Letter to be *F*; now I look for *January* in the Table, which I find in the uppermoſt Line; and againſt it to the Right Hand, I look for *F*, which I find in the *6th* Column; I call it *Sunday*; the next to the Right Hand (*G*) I call *Monday*, and *A Tueſday*, the firſt Day of the Month. Now in that Column I find 1-8-15-22-29, all the *Tueſdays* in *January*; in the next I find 2-9-16-23-30, all the *Wedneſdays* in the Month; the third Column, *Thurſdays*; the fourth *Fridays*, and ſo thro' the Year 1736, being Leap-Year, I muſt make uſe of two Letters. I look in the Table, Page 7, for the Dominical Letters, which I find to be *D C*. Now D ſerving till the *24th* of *February*, I look for *D* againſt *January*; I find it ſtand above the fourth Day of the Month, which is the firſt *Sunday* in *January*, and the Numbers in the next to the Right, are all *Mondays*; and conſequently the next Column to the Left muſt contain all the *Saturdays* in the Month.

Againſt *Feburary* I find *D* in the firſt Column all *Sundays*: C ſerves for all the reſt of the Year.

A Table *ſhewing the Day of the Month, and the Day of the Week in both Acconnts for ever.*

Jan 31. *Octob* 31.	*A*	B	C	D	E	F	G
Feb. 28. *Mar* 31. *Nov.* 30.	D	E	F	G	*A*	B	C
April 30. *July* 31.	G	*A*	B	C	D	E	F
May 31.	B	G	D	E	F	G	*A*
June 30	E	F	G	*A*	B	C	D
Auguſt 31.	C	D	E	F	G	*A*	B
Septemb 30. *Decemb* 31.	F	G	*A*	B	C	D	E
Days of the Month.	1	2	3	4	5	6	7
	8	9	10	11	12	13	14
	15	16	17	18	19	20	21
	22	23	24	25	26	27	28
	29	30	31				

For the Foreign Day of the Month, take the *Gregorian* Letter, and the ſame method that you uſe in finding the *Britiſh*.

Example for 1734. I look for the Dominical Letter in the Table, Page 9, which is C, and I find it in the 3*d* Column againſt *Jan.* which ſhews me, the Firſt *Sunday* falls on the 3d Day of the Month: I make this *Sunday* my Key-Day to find what Day of the Week any Day of the Month falls: So I find, *Jan.* begins on *Friday*, *Feb. Mar.* and *Nov.* on *Monday*. The Year 1736. A G are the Dominical Letters. By A I ſee *Jan.* begins on *Sunday*; and by the ſame Letter *Feb.* on *Wedneſday*: By G *Mar.* and *Nov.* begin on *Thurſday*; *Apr.* and *July* on *Sunday*, *May* on *Tueſday*; *June* on *Friday*; *Aug.* on *Wedneſday*; *Sept.* and *December* on *Saturday*; 1800, E is the Letter; *Jan.* begins on *Wedneſday*, *Feb. Mar. Nov.* on *Saturday*.

A Table *ſhewing the* Golden Number *till the Year* 5400.

The odd Year Is to be found here.						3600 1700	3700 1800	3800 1900	3900 2000	4000 2100	4100 2200	4200 2300	4300 2400	4400 2500	4500 2600	4600 2700	4700 2800	4800 2900	4900 3000	5000 3100	5100 3200	5200 3300	5300 3400	5400 3500
0	19	38	57	76	95	10	15	1	6	11	16	2	7	12	17	3	8	13	18	4	9	14	19	5
1	20	39	58	77	96	11	16	2	7	12	17	3	8	13	18	4	9	14	19	5	10	15	1	6
2	21	40	59	78	97	12	17	3	8	13	18	4	9	14	19	5	10	15	1	6	11	16	2	7
3	22	41	60	79	98	13	18	4	9	14	19	5	10	15	1	6	11	16	2	7	12	17	3	8
4	23	42	61	80	99	14	19	5	10	15	1	6	11	16	2	7	12	17	3	8	13	18	4	9
5	24	43	62	81		15	1	6	11	16	2	7	12	17	3	8	13	18	4	9	14	19	5	10
6	25	44	63	82		16	2	7	12	17	3	8	13	18	4	9	14	19	5	10	15	1	6	11
7	26	45	64	83		17	3	8	13	18	4	9	14	19	5	10	15	1	6	11	16	2	7	12
8	27	46	65	84		18	4	9	14	19	5	10	15	1	6	11	16	2	7	12	17	3	8	13
9	28	47	66	85		19	5	10	15	1	6	11	16	2	7	12	17	3	8	13	18	4	9	14
10	29	48	67	86		1	6	11	16	2	7	12	17	3	8	13	18	4	9	14	19	5	10	15
11	30	49	68	87		2	7	12	17	3	8	13	18	4	9	14	19	5	10	15	1	6	11	16
12	31	50	69	88		3	8	13	18	4	9	14	19	5	10	15	1	6	11	16	2	7	12	17
13	32	51	70	89		4	9	14	19	5	10	15	1	6	11	16	2	7	12	17	3	8	13	18
14	33	52	71	90		5	10	15	1	6	11	16	2	7	12	17	3	8	13	18	4	9	14	19
15	34	53	72	91		6	11	16	2	7	12	17	3	8	13	18	4	9	14	19	5	10	15	1
16	35	54	73	92		7	12	17	3	8	13	18	4	9	14	19	5	10	15	1	6	11	16	2
17	36	55	74	93		8	13	18	4	9	14	19	5	10	15	1	6	11	16	2	7	12	17	3
18	37	56	75	94		9	14	19	5	10	15	1	6	11	16	2	[illegible]	12	17	3	8	13	18	4

Find the even Hundred at the top, the odd Year in the ſide ; in the Place of meeting you'll find the Golden Number.

Example for the Year 1700. In the firſt Column at the Top, and in the next Line beneath it, and againſt the 0 in the ſide, I find 10, the Golden Number. You have the Golden Number for all theſe even Hundreds in the ſame Line, and for thoſe odd Years in the ſide that are in that Line.

Example for 1734. I find 1700 at the Head, 34 in the Side, in that Column under 1700, and againſt 34 I find 6, the Golden Number. *Note*, The Golden Number is the ſame in both Accounts.

The *Julian Eaſter* calculated for 100 Years.

Eaſter-day.	Eaſter-day.	Eaſter-day.	Eaſter-day.
1734 Apr. 14	1762 Apr. 7	1790 Mar. 24	1818 Apr. 14
1735 Apr. 6	1763 Mar. 23	1791 Apr. 13	1819 Apr. 6
1736 Apr. 25	1764 Apr. 11	1792 Apr. 4	1820 Mar. 28
1737 Apr. 10	1765 Apr. 3	1793 Apr. 24	1821 Apr. 10
1738 Apr. 2	1766 Apr. 23	1794 Apr. 9	1822 Apr. 2
1739 Apr. 22	1767 Apr. 8	1795 Apr. 1	1823 Apr. 22
1740 Apr. 6	1768 Mar. 30	1796 Apr. 20	1824 Apr. 6
1741 Mar. 29	1769 Apr. 19	1797 Apr. 5	1825 Mar. 29
1742 Apr. 18	1770 Apr. 4	1798 Mar. 28	1826 Apr. 18
1743 Apr. 3	1771 Mar. 27	1799 Apr. 17	1827 Apr. 3
1744 Mar. 25	1772 Apr. 15	1800 Apr. 8	1828 Mar. 25
1745 Apr. 14	1773 Mar. 31	1801 Mar. 24	1829 Apr 14
1746 Mar. 30	1774 Apr. 6	1802 Apr. 13	1830 Apr. 2
1747 Apr. 19	1775 Apr. 12	1803 Apr. 5	1831 Apr. 19
1748 Apr. 10	1776 Apr. 3	1804 Apr. 24	1832 Apr. 10
1749 Mar. 26	1777 Apr. 16	1805 Apr. 9	1833 Apr. 2
1750 Apr. 15	1778 Apr. 8	1806 Apr. 1	
1751 Apr. 7	1779 Mar. 31	1807 Apr. 14	
1752 Mar. 29	1780 Apr. 19	1808 Apr. 5	
1753 Apr. 11	1781 Apr. 4	1809 Mar. 28	
1754 Apr. 3	1782 Mar. 27	1810 Apr. 17	
1755 Apr. 23	1783 Apr. 16	1811 Apr. 2	
1756 Apr. 14	1784 Mar. 31	1812 Apr. 21	
1757 Mar. 30	1785 Apr. 20	1813 Apr. 13	
1758 Apr. 19	1786 Apr. 12	1814 Mar. 29	
1759 Apr. 11	1787 Mar. 28	1815 Apr. 18	
1760 Mar. 26	1788 Apr 16	1816 Apr. 9	
1761 Apr. 15	2789 Apr. 8	1817 Mar. 25	

You have nothing to do here
But to look for
the Year; and
In that Column
and Line
Eaſter-day *you*
will find.

The Gregorian Eaſter *calculated for* 100 *Years.*

Eaſter-Day.	Eaſter-Day.	Eaſter-Day.	Eaſter-Day.
1734 Apr.25	1762 Apr.11	1790 Apr. 4	1818 Mar.22
1735 Apr.10	1763 Apr. 3	1791 Apr.24	1819 Apr.11
1736 Apr. 1	1764 Apr.22	1792 Apr.15	1820 Apr. 2
1737 Apr.21	1765 Apr. 7	1793 Mar.31	1821 Apr.22
1738 Apr. 6	1766 Mar 30	1794 Apr.20	1822 Apr. 7
1739 Mar.29	1767 Apr.19	1795 Apr.12	1823 Mar.30
1740 Apr.17	1768 Apr. 3	1796 Mar.27	1824 Apr.18
1741 Apr. 2	1769 Mar.26	1797 Apr.16	1825 Apr. 3
1742 Mar.25	1770 Apr.15	1798 Apr. 8	1826 Mar.26
1743 Apr.14	1771 Mar.31	1799 Mar.24	1827 Apr.15
1744 Apr. 5	1772 Apr.19	1800 Apr.13	1828 Apr. 6
1745 Apr.18	1773 Apr.11	1801 Apr. 5	1829 Apr 19
1746 Apr.10	1774 Apr. 3	1802 Apr.18	1830 Aps.11
1747 Apr. 2	1775 Apr.16	1803 Apr.10	1831 Apr. 3
1748 Apr.14	1776 Apr. 7	1804 Apr. 1	1832 Apr.22
1749 Apr. 6	1777 Mar 30	1805 Apr.14	1833 Apr. 7
1750 Mar 29	1778 Apr.19	1806 Apr. 6	
1751 Apr.11	1779 Apr. 4	1807 Mar.29	
1752 Apr. 2	1780 Mar.26	1808 Apr.17	
1753 Apr.22	1781 Apr.15	1809 Apr. 2	
1754 Apr.14	1782 Apr. 7	1810 Apr.22	
1755 Mar.30	1783 Mar.23	1811 Apr.14	
1756 Apr.18	1784 Apr.11	1812 Mar.29	
1757 Apr.10	1785 Mar.27	1813 Apr.18	
1758 Mar. 26	1786 Apr.16	1814 Apr.10	
1759 Apr.15	1787 Apr. 8	1815 Mar.26	
1760 Apr. 6	1788 Mar.30	1816 Apr.14	
1761 Mar.22	1789 Apr.12	1817 Apr. 6	

You have nothing to do here,
But to look for the Year.
In that Column and Line
Eaſter - Day *you will find.*

A Table, *ſhewing what Days in theſe Months are equal to each other ; and may ſerve for all the Months in the Year.*

March		*April.*		*Febru.*	
Julian	Gregorian	Julian	Gregorian	Julian	Gregorian
1	12	1	12	1	12
2	13	2	13	2	13
3	14	3	14	3	14
4	15	4	15	4	15
5	16	5	16	5	16
6	17	6	17	6	17
7	18	7	18	7	18
8	19	8	19	8	19
9	20	9	20	9	20
10	21	10	21	10	21
11	22	11	22	11	22
12	23	12	23	12	23
13	24	13	24	13	24
14	25	14	25	14	25
15	26	15	26	15	26
16	27	16	27	16	27
17	28	17	28	17	28
18	29	18	29	18	1 29
19	30	19	30	19	2 1
20	31	20	1	20	3 2
21	1	21	2	21	4 3
22	2	22	3	22	5 4
23	3	28	4	23	6 5
24	4	24	5	24	7 6
25	5	25	6	24	8 7
26	6	26	7	26	9 8
27	7	27	8	27	10 9
28	8	28	9	28	11 10
29	9	29	10	or	
30	10	30	11	29	11
31	11				

Example 1. I demand, what Day of the *Britiſh* Month the *Roman Eaſter* falls on in the Year 1734? Now, I look for the *Gregorian*, or *Roman Eaſter* in the Table, Page 15; and finding it to be the 25*th* of *April*, according to their Account; I look in this Table for the 25*th* of the *Gregorian April*; and againſt it I find the 14*th* of the *Julian April*, which anſwers the Queſtion.

Now, finding the *Julian* or *Britiſh Eaſter* to be on the 14*th* of *April*, I conclude, both *Eaſters* fall on the very ſame Day: And the Year 1733, they fell on the ſame Day, theirs the 5*th* of *April*, and ours the 25*th* of *March*.

Example 2, for 1739. The *Roman Eaſter* falls on the 29*th* of *March*, equal to the 18*th* of the *Britiſh March*; the *Britiſh Eaſter* on the 22*d* of *April*, equal to the 3*d* of the *Roman May*.

The firſt two Columns ſerve for all the Months that have 31 Days, the 2*d* for thoſe Months that have but 30, and *Febr.* for it ſelf, in Leap Year, 29.

As the firſt of our Month is equal to their 12*th*, ſo muſt the 11*th* of their following Month be equal to the laſt of our Month.

The Year 1800, the firſt of the *Julian* Month will be equal to the 13*th* of the *Gregorian*. The Year 1900, our firſt, will be equal to their 14*th*, &c.

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A Perpetual Table *to find the Moveable Feaſts in both Accounts.*

Nº Direct.	*Shrove Sund.*	*Shrove Sunday in Leap Year.*	*Mid Lent Sund.*	*Eaſter-Day.*	*Rogat. Sund.*	*Aſcenſ Day.*	*Whit-Snnday*	*Trinity-Sunday.*	*Advent Sunday*
1	Feb. 1	Feb. 2	Mar 1	Mar 22	Ap. 26	Apr. 30	May 10	May 17	Nov 29
2	2	3	2	23	27	May 1	11	18	30
3	3	4	3	24	28	2	12	19	Dec. 1
4	4	5	4	25	29	3	13	20	2
5	5	6	5	26	30	4	14	21	3
6	6	7	6	27	May 1	5	15	22	Nov 27
7	7	8	7	28	2	6	16	23	28
8	8	9	8	29	3	7	17	24	29
9	9	10	9	30	4	8	18	25	30
10	10	11	10	21	5	9	19	26	Dec. 1
11	11	12	11	April 1	6	10	20	27	2
12	12	13	12	2	7	11	21	28	3
13	13	14	13	3	8	12	22	29	Nov 27
14	14	15	14	4	9	13	23	30	28
15	15	16	15	5	10	14	24	31	29
16	16	17	16	6	11	15	25	June 1	30
17	17	18	17	7	12	16	26	2	Dec. 1
18	18	19	18	8	13	17	27	3	2
19	19	20	19	9	14	18	28	4	3
20	20	21	20	10	15	19	29	5	Nov 27
21	21	22	21	11	16	20	30	6	28
22	22	23	22	12	17	21	31	7	29
23	23	24	23	13	18	22	June 1	8	30
24	24	25	24	14	19	23	2	9	Dec. 1
25	25	26	25	15	20	24	3	10	2
26	26	27	26	16	21	25	4	11	3
27	27	28	27	17	22	26	5	12	Nov 27
28	28	29	28	18	23	27	6	13	28
29	Mar. 1		29	19	24	28	7	14	29
30	2		30	20	25	29	8	15	30
31	3		31	21	26	30	9	16	Dec. 1
32	4		Apr. 1	22	27	31	10	17	2
33	5		2	23	28	June 1	11	18	3
34	6		3	24	29	2	12	19	Nov 27
35	7		4	25	30	3	13	20	28

The Explanation of the preceding Table.

TO find the Moveable Feaſts and Faſts, enter the Table with either Eaſter, or the Number of Direction, which you like beſt; and in that Line you have the Moveable Feaſts for any Year propoſ'd.

Example 1. I look for Eaſter in the Table, Page 14, for the Year 1734; and I find it to be the 14*th* of *April.* Now I look for the Title *Eaſter* at the Top of this Table; and guiding my Eye down that Column till I come to *April* 14, in a Line to the Right and Left, I have all the Moveable Feaſts and Faſts at one View, *Mid-Lent Sunday, Mar.* 24; *Shrove-Sunday Feb.* 24; *Rogation Sunday, May* 19; *Aſcenſion-Day, May* 23; and ſo thro'.

Example 2 I look for the Number of Direction for the Year 1800: In the Table, Page 21, I find it to be 18. I enter the Table with 18 in the firſt Column on the Left hand; and it being Leap-Year, I look for *Shrove-Sunday* in the ſecond large Column, and find it to be *Feb.* 29, *Mid-Lent Sunday, Mar.* 28; Eaſter-Day, *Apr.* 18.

To find the Roman Feaſts.

FInd the *Gregorian* Eaſter, or Number of Direction. Enter this Table with either of them, after the ſame manner as before mention'd, and you have your deſire. The *Roman* Eaſter for 1734, falls on *Apr.* 25, *Middle Lent Sunday, Apr.* 4; *Shrove-Sunday, Mar.* 7, &c. *Shrove-Tueſday*, the next after *Shrove-Sunday*; Firſt Day of *Lent*, next *Wedneſday* after, commonly call'd *Aſh-Wedneſday.*

The Explanation of the following Table.

FIRST, find the Dominical Letter, and the Golden Number for the Year propos'd; then enter the Table with the Golden Number on the Left hand Side, and the Dominical Letter at the Top; in the Place of meeting you have the Number of Direction.

Example 1, for 1734. In the Table, Page 7, I find the Dominical Letter is *F*: In the Table, Page 13, I look for the Golden Number, which is *6*. Now, I ſeek for 6 *in* the firſt Column of this Table, and *F* at the Head; in the Angle of meeting I find 24, the Number of Direction for that Year.

Example 2, for 1700. The Dominical Letters are GF, (Obſerve, you muſt never uſe the Letter to the Left hand to this Table,) the Golden Number 10. Now, from 10 in this Table, guide your Eye till you come under F; and there you will find 10, the Number of Direction; and this Number directs you to the Movable Feaſts in the Table, Page 18, the ſaid Year 1700.

Example 3, for 1815, C the Dominical Letter, 11 the Golden Number; by which I diſcover the Number of Direction to be 28; with this 28 I enter the Table for the Movable Feaſts and Faſts; which ſhews me, that *Shrove-Sunday* falls on *Feb.* 28, Middle *Lent Sunday* *Mar.* 28, *Eaſter-Day* *Apr.* 18, *Rogation-Sunday* *May* 23, *Aſcenſion-day*, or *Holy Thurſday* *May* 27, *Whit-Sunday* *June* 6, *Trinity-Sunday* *June* 13, *Advent-Sunday* *November* 28.

Golden

A Table to find the *Julian* Number of Direction for ever; by which may be found the Movable Feaſts.

Golden Number.	A	B	C	D	E	F	G
1	19	20	21	22	16	17	18
2	5	6	7	8	9	10	11
3	26	27	28	29	30	24	25
4	9	13	14	15	16	17	18
5	5	6	7	8	2	3	4
6	26	27	21	22	23	24	25
7	12	13	14	15	16	10	11
8	33	34	35	29	30	31	32
9	19	20	21	22	23	24	18
10	12	13	7	8	9	10	11
11	26	27	28	29	30	31	32
12	19	20	21	15	16	17	18
13	5	6	7	8	9	10	4
14	26	27	28	29	23	24	25
15	12	13	14	15	16	17	18
16	5	6	7	1	2	3	4
17	26	20	21	22	23	24	25
18	12	13	14	15	9	10	11
19	33	34	28	29	30	31	32

Find the Golden Number for any Year,
And againſt it the Epact will appear.

Golden Number.	*Epact*
1	11
2	22
3	3
4	14
5	25
6	6
7	17
8	28
9	9
10	20
11	1
12	12
13	23
14	4
15	15
16	26
17	7
18	18
19	29

Another way of finding *Eaſter* by the Number of Direction: If this Number be 10, or under 10, *Eaſter* falls in *March*; if 11, or above, in *April*; and if in *April*, ſubtract 10, the Remainder gives *Eaſter*-Day in *April*; but if in *March*, add 21, the Sum will give *Eaſter*-Day in *March*. And contrary; you may find the Number of Direction by *Eaſter*; if in *March*, by ſubtracting 21; if in *April*, by adding 10.

A Perpetual Table *to to find the* Gregorian *Number of Direction.*

Golden Number	A	*B*	C	D	E	F	G
1	26	27	28	29	30	24	25
2	19	13	14	15	16	17	18
3	5	6	7	8	9	10	4
4	26	27	21	22	23	24	25
5	12	13	14	15	16	10	11
6	33	34	35	29	30	31	32
7	19	20	21	22	23	24	25
8	12	13	7	8	9	10	11
9	26	27	28	29	30	31	32
10	19	20	21	22	16	17	18
11	5	6	7	8	9	10	11
12	26	27	28	29	23	24	25
13	12	13	14	15	16	17	18
14	5	6	7	1	2	3	4
15	26	20	21	22	23	24	25
16	12	13	14	15	16	17	11
17	33	34	28	29	30	31	32
18	19	20	21	22	23	17	18
19	12	6	7	8	9	10	11

This Foreign Number of *Direction* is found by the ſame Rules above-mentioned, with this only difference, that it muſt be done with the *Gregorian* Letter: For the Golden Number is the ſame for both Accounts.

For Example: *C B* being the *Dominical Letters* for 1740, and the Golden Number 12, I look for 12 in the firſt Column, and for *B* at the Top, and in the Place of meeting I find 27, the *Number of Direction* for the Year 1740.

Note, if there be two Dominical Letters, you muſt always uſe that to the right Hand to this Table.

The Year 1754, the Number of Direction is 24; from which I ſubtract 10, to find Eaſter-Day in *April.*

The Year 1771, the Number of Direction is 10; to which I add 21. See the Work: The Reverſe of theſe Examples ſhews the Number of Direction, as I mention'd before.

Direction	24	Year 1754
Subtract	10	
	—	
Remains	14	Eaſter *April.*
Direction	10	Year 1771
Add	21	
	—	
The Sum	31	Eaſter *Masch.*

Add 10 to 14, gives 24. Subtract 21 from 31, and remains 10, the Number of Direction.

The

The Roman EPACT.

The odd Year Is to be found here.						1700	1800	2000 1900	2100	2200	2400 2300	2500	2600	2800 2700	2900
0	19	38	57	76	95	9	3	28	17	11	6	25	19	14	3
1	20	39	58	77	96	20	14	9	28	22	17	6	1	25	14
2	21	40	59	78	97	1	25	20	9	3	28	17	12	6	25
3	22	41	60	79	98	12	6	1	20	14	9	28	23	17	6
4	23	42	61	80	99	23	17	12	1	25	20	9	4	28	17
5	24	43	62	81		4	28	23	12	6	1	20	15	9	28
6	25	44	63	82		15	9	4	23	17	12	1	26	20	9
7	26	45	64	83		26	20	15	4	28	23	12	7	1	20
8	27	46	65	84		7	1	26	15	9	4	23	18	12	1
9	28	47	66	85		18	12	7	26	20	15	4	29	23	12
10	29	48	67	86		29	23	18	7	1	26	15	11	4	23
11	30	49	68	87		11	4	29	18	12	7	26	22	15	4
12	31	50	69	88		22	15	11	29	23	18	7	3	26	15
13	32	51	70	89		3	26	22	11	4	29	18	14	7	26
14	33	52	71	90		14	7	3	22	15	11	29	25	18	7
15	34	53	72	91		25	18	14	3	26	22	11	6	29	18
16	35	54	73	92		6	29	25	14	7	3	22	17	11	29
17	36	55	74	93		17	11	6	25	18	14	3	28	22	11
18	37	56	75	94		28	22	17	6	29	25	14	9	3	22

Look for the even Hundreds at the Top, and the odd Year in the Left hand Side, and in the Angle of meeting you have the Epact.

Example for the Year 1734. I find 1700 at the Top, 34 in in the Side; I guide my Eye to the Right hand, till I come under 1700, and there I find 25, the Epact for the ſaid Year, 18 for 1834.

For the even Hundreds you have the Epacts in the uppermoſt Line beneath them; and againſt the 0 in the Side; 9 for 1700, 3 for 1800, 28 for 1900; 9 is the Epact for 1719. All theſe odd Years in that Line have their reſpective Epacts againſt them.

The Terms and their Returns.

Hillary-Term begins *Jan.* 23. and ends *Febr.* 12.

And	1	*January* 20
has	9	*January* 27
Four	3	*February* 3
Returns.	4	*February* 9

Obſerve, each Return conains as many Days as there are Returns in the Term.

Eaſter-Term begins the *Wedneſday*-Fornight after *Eaſter*, and ends on *Monday* after Aſcenſion. Each Return continues Five Days.

And	1	15 Days after *Eaſter.*
has	2	3 Weeks after *Eaſter.*
Five	3	1 Month after *Eaſter.*
Returns.	4	5 Weeks after *Eaſter.*
	5	The Day after *Aſcenſion.*

Trinity-Term begins on *Friday* after Trinity-*Sunday*. and ends *Wedneſday* Fortnight after. Each Return continues Four Days.

And	1	The *Monday* after Trinity-*Sunday.*
has	2	8 Days after Trinity-*Sunday*.
Four	3	15 Days after Trinity-*Sunday.*
Returns.	4	3 Weeks after Trinity-*Sunday.*

Michaelmas-Term begins *Octob.* 23, and ends *Nov.* 28.

	1	*October* 20
And	2	*October* 29
has	3	*November* 4
Six	4	*November* 12
Returns.	5	*November* 18
	6	*November* 25

Theſe Return-Days are ſet apart for the ſeveral parts of Proceedings in any Cauſe to be determined.

The Law has Turns, and Returns many,
Or Right, or Wrong, to get a Peny.

The Fixed Feaſts and Faſts.

Circumciſion, or New Year's Day,	*Jan.*	1
Epiphany, or Twelfth Day,	*Jan.*	6
Converſion of St. *Paul*,	*Jan.*	25
Martyrdom of King *Charles* the Firſt	*Jan.*	30
Purification of the V. *Mary*, or *Candlemas-Day*,	*Feb.*	2
St. *Matthias* (in Leap-Year 25)	*Feb.*	24
Lady-Day, or Annunciation of the V. *Mary*,	*Mar.*	25
St. *Mark* the Evangeliſt,	*Apr.*	25
St. *Philip* and *Jacob*, or *May Day*,	*May*	1
The Birth and Return of King *Charles* II.	*May*	29
St. *Barnabas* the Apoſtle.	*June*	11
St. *John the Baptiſt*, or Midſummer-Day,	*June*	24
St. *Peter* the Apoſtle,	*June*	29
St. *James* the Apoſtle,	*July*	25
St. *Bartholomew* the Apoſtle,	*Aug.*	24
St. *Matthew* the Apoſtle,	*Sept.*	21
Michaelmas, or St. *Michael* the Arch-angel,	*Sept.*	29
St. *Luke* the Evangeliſt,	*Oct.*	18
St. *Simon* and *Jude*,	*Oct.*	28
All Saints,	*Nov.*	1
Gun-Powder-Treaſon,	*Nov.*	5
St. *Andrew* the Apoſtle,	*Nov.*	30
St. *Thomas* the Apoſtle,	*Dec.*	21
Chriſtmas, or the Nativity of our Lord,	*Dec.*	25
St. *Stephen* the Proto Martyr,	*Dec*	26
St. *John* the Evangeliſt,	*Dec.*	27
Innocents,	*Dec.*	28

There are four Weeks in the Year, call'd *Ember Weeks*; the firſt Week in Lent, the next after Whit-Sunday, the 14*th* of *September*, and the 13*th* of *December*, Paſſion-Week, the Week before Eaſter, Paſſion-Sunday, the ſecond Sunday before Eaſter, Palm-Sunday, the firſt before Eaſter, Low-Sunday, the firſt after Eaſter, *Corpus Chriſti*, Thurſday after Trinity-Sunday.

Remarkable DAYS.

King *George* the Second Born *Oct.* 30, 1683
Queen *Caroline* Born *March* 1, 1682,3
The Prince of *Wales* Born *Jan.* [illegible] 20 1706
Princeſs *Anne* Born *Oct.* 22, —— 1709
Princeſs *Amalia* Born *May* 30, —— 1711
Princeſs *Carolina* Born *May* 30, —— 1713
Prince *William* Born *Apr.* 15, —— 1721
Princeſs *Mary* Born *Feb.* 22, —— 1721
Princeſs *Louiſa* Born *Dec.* 7. —— 1724

Hillary, —— —— —— *Jan* 13.
Valentine, —— —— *Feb.* 14.
David, or the *Welch* Champion, *Mar.* 1.
Equal Day and Night, —— *Mar.* 9.
Patrick, or the *Iriſh* Champion, *Mar.* 17.
George, or the *Engliſh* Champion, *Apr.* 23.
Longeſt Day, or St. *Barnabas*, --- *June* 11
Election of Sheriffs in *London*, *June* 24.
Swithin, —— —— *July* 15.
Dog-days begin, —— *July* 19.
Lammas, —— —— *Aug.* 1.
Dog-days end, —— —— *Aug.* 29.
Equal Day and Night, —— —— *Sept.* 12.
Sheriffs of *London* ſworn, —— *Sept.* 28.
Election of the Lord Mayor of *London*, *Sept.* 29.
Lord Mayor's Day, when ſworn at *Weſtminſter*, *Oct.* 29.
St. *Martin*, —— —— —— *Nov.* 11.
Shorteſt Day, —— —— —— *Dec.* 11.

The *Scotch* TERMS.

Candlemas-Term Begins *Jan.* 23. Ends *Feb*, 12. *Whitſuntide*-Term Begins *May* 25. Ends *June* 15. *Lammas*-Term Begins *July* 20, Ends *Aug* 8. *Martinmas*-Term Begins *Nov.* 3. Ends *Nov.* 29.

The *Iriſh* Terms are the ſame as *Weſtminſter*-Terms, except that *Michaelmas*-Term, which begins *Oct.* 13. adjourns to *Nov.* 3. and from thence to the 6th. It hath 7 Returns.

The

The Explanation of the Table *of the Sun's Declination, Riſing and Setting.*

FOR the Sun's Declination, find the Month at the Top, the Day of the Month in the Side; and in that Column, under the Month, and againſt the Day, you have the Sun's Declination North, or South.

For Example; *January* 1, the Sun's Declination is 21 Degrees, 41 Minutes South; *Feb.* 1, 13-42; *Mar.* 1, 3-19. Example 2. I deſire to know the Sun's Declination the 10th of *March*. I look for *March* at the Top, for the Day in the Side; and in the Place of meeting I find 0 N. 14, or 14 Minutes North Declination.

The Explanation of the Sun's Riſing and Setting at London, *&c.*

Guide your Eye from the Day in the Side, till you come to that Column under the Month you reckon in, and there you have the Hour and Minute of the Sun's Riſing and Setting. Example 1. I look for the firſt day of *January*, and againſt it I find 8 and 4, the Sun's Riſing and Setting. The 9th of *March* the Sun riſes at 6, and ſets at 6: The 15th of *Jan.* the Sun riſes 40 Minutes after 7, ſets 20 Minutes after 4: The 11th of *December* the Sun riſes 13 Minutes after 8, ſets 47 Minutes after 3. It is needleſs to give any Examples of the Sun's riſing and ſetting at *Edinburgh*; becauſe it's found after the ſame method. For the other Places following, you are only to look for the Name of the Place at the Top, for the Month and the Day in the Side, and in the Place of meeting you have the Sun's riſing and ſetting the 10th day of every Month in the Year: The 10th day of *June* the Sun riſes at *Archangel* 37 Minutes after 1, ſets 23 Minutes after 10; at *Conſtantinople*, the Sun riſes 26 Minutes after 4, and ſets 34 Minutes after 7, *&c.*

A Table *of the Sun's Declination.*

Days.	Jan.		Febr.		March.		April		May.		June.	
	D.	M.	D.	M	D.	M.	D.	M.	D.	M.	D.	M.
1	21 S.	41	13 S.	42	3 S.	19	8N	40	18N	8	23N.	12
2		30		22	2	56	9	1		23		16
3		20		1		32		23		38		19
4		10	12	41		9		45		52		22
5	20	58		20	1	45	10	6	10	6		25
6		45	11	59		21		27		20		26
7		34		38	0	57		49		34		28
8		21		17		34	11	9		46		28
9		8	10	55		10		30		59		29
10	19	55		34	0 N.	14		50	20	11		29
11		42		12		37	12	10		24		29
12		27	9	59	1	1		30		35		28
13		14		28		25		51		46		28
14	18	59		6		47	13	10		58		27
15		44	8	43	2	11		29	21	8		26
16		28		21		35		47		19		24
17		13	7	58		58	14	8		29		21
18	17	57		35	3	22		26		38		18
19		41		12		45		46		47		15
20		24	6	49	4	8	15	4		56		11
21		6		26		31		21	22	4		7
22	16	49		3		55		40		13		3
23		32	5	40	5	18		57		20	22	57
24		14		17		40	16	15		27		52
25	15	56	4	53	6	4		32		34		47
26		37		30		26		48		41		41
27		19		7		48	17	5		47		34
28		00	3	43	7	11		21		53		25
29	14	41				33		37		58		20
30		21				55		53	23	3		12
31		2			8	17				7		

A

The Sun's Declination continu'd.

Days	July.		Auguſt		Sept.		Octob		Nov.		Dec.	
	D.	M.	D:	M.	D.	M.	M.	D.	D.	M.	D.	M.
1	22N.	4	15 N.	5	4 N.	17	7 S.	22	17 S.	44	23N.	8
2	21	55	14	47	3	54		44	18	1		12
3		46		29		31	8	7		16		16
4		37		10		8		29		32		20
5		28	13	52	2	45		51		47		23
6		17		32		20	9	14	19	1		25
7		7		12	1	57		36		16		27
8	20	57	12	52		35		58		30		28
9		46		33		10	10	19		44		29
10		34		14	0	47		41		57		29
11		23	11	54		23	11	2	20	11		29
12		11		34	0 S.	0		23		23		28
13	19	58		13		24		45		36		27
14		45	10	53		47	12	5		48		26
15		33		31	1	11		26		59		25
16		19		10		34		47	21	16		24
17		5	9	49		56	13	7		21		20
18	18	52		27	2	20		27		32		17
19		37		6		45		48		42		15
20		23	8	45	3	8	14	7		51		10
21		8		23		30		26	22	1		5
22	17	53		2		53		45		9		0
23		37	7	39	4	18	15	4		18	22	55
24		21		17		41		23		26		49
25		5	6	55	5	5		42		33		41
26	16	49		32		27	16	0		40		35
27		32		10		50		18		46		27
28		15	5	47	6	13		35		53		19
29	15	58		24		36		53		58		11
30		41		3		59	17	10	23	3		2
31		23	4	40				27			21	53

A Perpetual Table *of the Sun's Riſing and Setting* a London, Amſterdam, Hanover, Antwerp, Berlin, Oſtend *and* Warſaw.

Days.	January.				February.				March.				April.			
	Sun r.		Sun ſ.		Sun r.		Sun ſ.		Sun r		Sun ſ.		Sun r.		Sun ſ.	
	h	m.	h.	m	h.	m.	h	m.	h	m	h	m.	h.	m.	h.	m.
1	8	0	4	0	7	11	4	49	6	17	5	43	5	16	6	44
2	7	59	4	1	7	9	4	51	6	14	5	46	5	14	6	46
3	7	57	4	3	7	7	4	52	6	12	5	48	5	12	6	48
4	7	56	4	4	7	6	4	54	6	10	5	50	5	10	6	50
5	7	55	4	5	7	4	4	56	6	8	5	52	5	8	6	52
6	7	54	4	6	7	2	4	58	6	6	5	54	5	7	6	53
7	7	53	4	7	7	0	5	0	6	4	5	56	5	5	6	55
8	7	51	4	9	6	58	5	2	6	2	5	58	5	3	6	57
9	7	49	4	11	6	56	5	4	6	0	6	0	5	1	6	59
10	7	48	4	12	6	54	5	6	5	58	6	2	5	0	7	0
11	7	47	4	13	6	52	5	8	5	56	6	4	4	58	7	2
12	7	46	4	14	6	50	5	10	5	54	6	6	4	26	7	4
13	7	44	4	16	6	48	5	12	5	53	6	7	4	54	7	6
14	7	42	4	18	6	46	5	14	5	51	6	9	4	52	7	8
15	7	40	4	20	6	44	5	16	5	49	6	11	4	50	7	10
16	7	39	4	21	6	42	5	18	5	47	6	13	4	48	7	12
17	7	37	4	23	6	40	5	20	5	45	6	15	4	46	7	14
18	7	36	4	24	6	38	5	22	5	43	6	17	4	44	7	16
19	7	34	4	26	6	36	5	24	5	41	6	19	4	42	7	18
20	7	33	4	27	6	34	5	26	5	39	6	21	4	40	7	20
21	7	31	4	29	6	32	5	28	5	37	6	23	4	39	7	21
22	7	29	4	31	6	30	5	30	5	35	6	25	4	37	7	23
23	7	27	4	33	6	28	5	32	5	33	6	27	4	35	7	25
24	7	25	4	35	6	26	5	34	5	31	6	29	4	33	7	26
25	7	24	4	36	6	24	5	36	5	29	6	31	4	32	7	28
26	7	22	4	38	6	22	5	38	5	27	6	33	4	31	7	29
27	7	20	4	40	6	20	5	40	5	25	6	35	4	29	7	31
28	7	19	4	41	6	18	5	42	5	23	6	37	4	27	7	33
29	7	17	4	43					5	21	6	39	4	25	7	35
30	7	15	4	45					5	19	6	41	4	24	7	36
31	7	13	4	47					5	17	6	43			7	

The

The Table *of the Sun's Riſing and Setting at* London, Amſterdam, Hanover, Antwerp, Berlin, Oſtend *and* Warſaw, *continu'd.*

Days.	May.				June.				July.				Auguſt.			
	Sun r.		Sun ſ.		Sun r.		Sun ſ.		Sun r.		Sun ſ.		Sun r.		Sun ſ.	
	h.	m.	h.	m	h	m.	h.	m	h.	m.	h.	m.	h.	m.	h.	m.
1	4	23	7	37	3	49	8	11	3	57	8	3	4	41	7	19
2	4	21	7	39	3	49	8	11	3	58	8	2	4	42	7	18
3	4	19	7	41	3	48	8	12	3	59	8	1	4	43	7	17
4	4	18	7	42	3	48	8	12	4	0	8	0	4	45	7	15
5	4	16	7	44	3	48	8	12	4	1	7	59	4	47	7	13
6	4	15	7	45	3	48	8	12	4	3	7	57	4	49	7	11
7	4	14	7	46	3	48	8	12	4	4	7	56	4	51	7	9
8	4	12	7	48	3	47	8	13	4	5	7	55	4	52	7	8
9	4	10	7	50	3	47	8	13	4	7	7	53	4	54	7	6
10	4	9	7	51	3	47	8	13	4	8	7	52	4	56	7	4
11	4	8	7	52	3	47	8	13	4	9	7	51	4	58	7	2
12	4	7	7	53	3	47	8	13	4	10	7	50	5	0	7	0
13	4	6	7	54	3	47	8	13	4	11	7	49	5	2	6	58
14	4	5	7	55	3	47	8	13	4	13	7	47	5	4	6	56
15	4	4	7	56	3	48	8	12	4	15	7	45	5	6	6	54
16	4	3	7	57	3	48	8	12	4	16	7	44	5	8	6	52
17	4	2	7	58	3	48	8	12	4	17	7	43	5	10	6	50
18	4	1	7	59	3	49	8	11	4	18	7	42	5	12	6	48
19	3	59	8	1	3	49	8	11	4	20	7	40	5	13	6	47
20	3	58	8	2	3	49	8	11	4	21	7	39	5	15	6	45
21	3	57	8	3	3	50	8	10	4	23	7	37	5	17	6	43
22	3	56	8	4	3	50	8	10	4	24	7	36	5	19	6	41
23	3	55	8	5	3	51	8	9	4	26	7	34	5	21	6	39
24	3	54	8	6	3	51	8	9	4	27	7	33	5	23	6	37
25	3	54	8	6	3	52	8	8	4	29	7	31	5	24	6	36
26	3	53	8	7	3	52	8	8	4	30	7	30	5	26	6	34
27	2	52	8	8	3	53	8	7	4	32	7	28	5	28	6	32
28	3	51	8	9	3	54	8	6	4	34	7	26	5	30	6	30
29	3	50	8	10	3	55	8	5	4	35	7	25	5	32	6	28
30	3	50	8	10	3	56	8	4	4	37	7	23	5	34	6	26
31	3	49	1	11					4	39	7	21	5	36	6	24

The Table *of the Sun's Riſing and Setting at* London, Amſterdam, Hanover, Antwerp, Berlin, Oſtend, *and* Warſaw, *continu'd.*

Days.	September				October				November				December			
	Sun r.		Sun ſ.		Sun r.		Sun ſ.		Sun r.		Sun ſ.		Sun r.		Sun ſ.	
	h.	m.	h.	m.	h.	m.	h.	m.	h.	m.	h.	m.	h	m.	h.	m.
1	5	38	6	22	6	37	5	23	7	35	4	25	8	10	3	51
2	5	40	6	20	6	39	5	21	7	36	4	24	8	10	3	50
3	5	42	6	18	6	41	5	19	7	37	4	23	8	11	3	49
4	5	44	6	16	6	43	5	17	7	38	4	22	8	11	3	49
5	5	46	6	14	6	45	5	15	7	40	4	20	8	11	3	49
6	5	48	6	12	6	47	5	13	7	42	4	18	8	12	3	48
7	5	50	6	10	6	49	5	11	7	44	4	16	8	12	3	48
8	5	52	6	8	6	51	5	9	7	45	4	15	8	12	3	48
9	5	54	6	6	6	53	5	7	7	47	4	13	8	13	3	47
10	5	56	6	4	6	55	5	5	7	49	4	11	8	13	3	47
11	5	58	6	2	6	57	5	3	7	50	4	10	8	13	3	47
12	6	0	6	0	6	59	5	1	7	51	4	9	8	13	3	47
13	6	2	5	58	7	1	4	59	7	53	4	7	8	13	3	47
14	6	4	5	56	7	2	4	58	7	54	4	6	8	12	3	48
15	6	6	5	54	7	4	4	56	7	56	4	4	8	12	3	48
16	6	8	5	52	7	6	4	54	7	57	4	3	8	12	3	48
17	6	10	5	50	7	8	4	52	7	58	4	2	8	11	3	49
18	6	12	5	48	7	10	4	50	7	59	4	1	8	11	3	49
19	8	14	5	46	7	12	4	48	8	0	4	0	8	10	3	50
20	6	16	5	44	7	14	4	46	8	1	3	59	8	10	3	50
21	6	18	5	42	7	16	4	44	8	2	3	58	8	9	3	51
22	6	20	5	40	7	18	4	42	8	3	3	57	8	8	3	52
23	6	22	5	38	7	20	4	40	8	4	3	56	8	7	3	53
24	6	24	5	36	7	22	4	38	8	5	3	55	8	6	3	54
25	6	26	5	34	7	23	4	37	8	6	3	54	8	6	3	54
26	6	27	5	33	7	24	4	36	8	7	3	53	8	5	3	55
27	6	29	5	31	7	26	4	34	8	8	3	52	8	4	3	56
28	6	31	5	29	7	28	4	32	8	9	3	51	8	3	3	57
29	6	33	5	27	7	30	4	30	8	9	3	51	8	2	3	58
30	6	35	5	25	7	31	4	29	8	10	3	50	8	2	3	58
31					7	33	4	27					8	1	3	59

A *Perpetual* Table *of the Sun's Riſing and Setting at* Edinburgh, Inverarra, Copenhagen *and* Moſcow.

Days	January				February				March				April			
	Sun r.		Sun ſ.		Sun r.		Sun ſ.		Sun r		Sun ſ.		Sun r.		Sun ſ.	
	h.	m.	h.	m.	h.	m	h.	m.	h.	m	h.	m	h.	m.	h.	m.
1	8	25	3	35	7	25	4	35	6	20	5	40	5	8	6	52
2	8	24	3	36	7	23	4	37	6	18	5	41	5	6	6	54
3	8	22	3	38	7	21	4	39	6	15	5	45	5	4	6	56
4	8	21	3	39	7	18	4	42	6	13	5	47	5	1	6	59
5	8	19	3	41	7	16	4	44	6	11	5	49	4	58	7	2
6	8	18	3	42	7	14	4	46	6	8	5	52	4	56	7	4
7	8	16	3	44	7	11	4	49	6	6	5	54	4	54	7	6
8	8	15	3	45	7	9	4	51	6	3	5	57	4	51	7	9
9	8	13	3	47	7	7	4	53	6	0	6	0	4	49	7	11
10	8	11	3	49	7	5	4	55	5	58	6	2	4	47	7	13
11	8	9	3	51	7	3	4	57	5	56	6	4	4	45	7	15
12	8	7	3	53	7	0	5	0	5	53	6	7	4	42	7	18
13	8	5	3	55	6	58	5	2	5	51	6	9	4	40	7	20
14	8	3	3	57	6	55	5	5	5	48	6	12	4	38	7	22
15	8	1	3	59	6	53	5	7	5	46	6	14	4	36	7	24
16	7	59	4	1	6	51	5	9	5	44	6	16	4	34	7	26
17	7	57	4	3	6	48	5	12	5	41	6	19	4	32	7	28
18	7	55	4	5	6	46	5	14	5	38	6	22	4	30	7	30
19	7	53	4	7	6	44	5	16	5	36	6	24	4	28	7	32
20	7	51	4	9	6	41	5	19	5	34	6	26	4	26	7	34
21	7	49	4	11	6	39	5	21	5	32	6	28	4	24	7	36
22	7	47	4	13	6	37	5	23	5	30	6	30	4	22	7	38
23	7	45	4	15	6	35	5	25	5	28	6	32	4	20	7	40
24	7	43	4	17	6	32	5	28	5	26	6	34	4	18	7	42
25	7	41	4	19	6	29	5	31	5	24	6	36	4	15	7	45
26	7	39	4	21	6	27	5	33	5	21	6	39	4	13	7	47
27	7	37	4	23	6	25	5	35	5	19	6	41	4	11	7	49
28	7	34	4	26	6	23	5	37	5	17	6	43	4	9	7	51
29	7	32	4	28					5	15	6	45	4	7	7	53
30	7	30	4	30					5	12	6	48	4	5	7	55
31	7	28	4	32					5	10	6	50				

The Table *of the Sun's Riſing and Setting at* London, Amſterdam, Hanover, Antwerp, Berlin, Oſtend, *and* Warſaw, *continu'd.*

Days.	September.				October.				November.				December.			
	Sun r.		Sun ſ.		Sun r.		Sun ſ.		Sun r.		Sun ſ.		Sun r.		Sun ſ.	
	h.	m.	h.	m.	h.	m.	h.	m.	h.	m.	h.	m.	h	m.	h.	m.
1	5	38	6	22	6	37	5	23	7	35	4	25	8	10	3	51
2	5	40	6	20	6	39	5	21	7	36	4	24	8	10	3	50
3	5	42	6	18	6	41	5	19	7	37	4	23	8	11	3	49
4	5	44	6	16	6	43	5	17	7	38	4	22	8	11	3	49
5	5	46	6	14	6	45	5	15	7	40	4	20	8	11	3	49
6	5	48	6	12	6	47	5	13	7	42	4	18	8	12	3	48
7	5	50	6	10	6	49	5	11	7	44	4	16	8	12	3	48
8	5	52	6	8	6	51	5	9	7	45	4	15	8	12	3	48
9	5	54	6	6	6	53	5	7	7	47	4	13	8	13	3	47
10	5	56	6	4	6	55	5	5	7	49	4	11	8	13	3	47
11	5	58	6	2	6	57	5	3	7	50	4	10	8	13	3	47
12	6	0	6	0	6	59	5	1	7	51	4	9	8	13	3	47
13	6	2	5	58	7	1	4	59	7	53	4	7	8	13	3	47
14	6	4	5	56	7	2	4	58	7	54	4	6	8	12	3	48
15	6	6	5	54	7	4	4	56	7	56	4	4	8	12	3	48
16	6	8	5	52	7	6	4	54	7	57	4	3	8	12	3	48
17	6	10	5	50	7	8	4	52	7	58	4	2	8	11	3	49
18	6	12	5	48	7	10	4	50	7	59	4	1	8	11	3	49
19	8	14	5	46	7	12	4	48	8	0	4	0	8	10	3	50
20	6	16	5	44	7	14	4	46	8	1	3	59	8	10	3	50
21	6	18	5	42	7	16	4	44	8	2	3	58	8	9	3	51
22	6	20	5	40	7	18	4	42	8	3	3	57	8	8	3	52
23	6	22	5	38	7	20	4	40	8	4	3	56	8	7	3	53
24	6	24	5	36	7	22	4	38	8	5	3	55	8	6	3	54
25	6	26	5	34	7	23	4	37	8	6	3	54	8	6	3	54
26	6	27	5	33	7	24	4	36	8	7	3	53	8	5	3	55
27	6	29	5	31	7	26	4	34	8	8	3	52	8	4	3	56
28	6	31	5	29	7	28	4	32	8	9	3	51	8	3	3	57
29	6	33	5	27	7	30	4	30	8	9	3	51	8	2	3	58
30	6	35	5	25	7	31	4	29	8	10	3	50	8	2	3	58
31					7	33	4	27					8	1	3	59

A *Perpetual* Table *of the Sun's Riſing and Setting at* Edinburgh, Inverarra, Copenhagen *and* Moſcow.

Days.	January				February.				March.				April.			
	Sun r.		Sun ſ.		Sun r.		Sun ſ.		Sun r		Sun ſ.		Sun r.		Sun ſ.	
	h.	m.	h.	m.	h.	m	h.	m.	h.	m	h.	m	h.	m.	h.	m.
1	8	25	3	35	7	25	4	35	6	20	5	40	5	8	6	52
2	8	24	3	36	7	23	4	37	6	18	5	41	5	6	6	54
3	8	22	3	38	7	21	4	39	6	15	5	45	5	4	6	56
4	8	21	3	39	7	18	4	42	6	13	5	47	5	1	6	59
5	8	19	3	41	7	16	4	44	6	11	5	49	4	58	7	2
6	8	18	3	42	7	14	4	46	6	8	5	52	4	56	7	4
7	8	16	3	44	7	11	4	49	6	6	5	54	4	54	7	6
8	8	15	3	45	7	9	4	51	6	3	5	57	4	51	7	9
9	8	13	3	47	7	7	4	53	6	0	6	0	4	49	7	11
10	8	11	3	49	7	5	4	55	5	58	6	2	4	47	7	13
11	8	9	3	51	7	3	4	57	5	56	6	4	4	45	7	15
12	8	7	3	53	7	0	5	0	5	53	6	7	4	42	7	18
13	8	5	3	55	6	58	5	2	5	51	6	9	4	40	7	20
14	8	3	3	57	6	55	5	5	5	48	6	12	4	38	7	22
15	8	1	3	59	6	53	5	7	5	46	6	14	4	36	7	24
16	7	59	4	1	6	51	5	9	5	44	6	16	4	34	7	26
17	7	57	4	3	6	48	5	12	5	41	6	19	4	32	7	28
18	7	55	4	5	6	46	5	14	5	38	6	22	4	30	7	30
19	7	53	4	7	6	44	5	16	5	36	6	24	4	28	7	32
20	7	51	4	9	6	41	5	19	5	34	6	26	4	26	7	34
21	7	49	4	11	6	39	5	21	5	32	6	28	4	24	7	36
22	7	47	4	13	6	37	5	23	5	30	6	30	4	22	7	38
23	7	45	4	15	6	35	5	25	5	28	6	32	4	20	7	40
24	7	43	4	17	6	32	5	28	5	26	6	34	4	18	7	42
25	7	41	4	19	6	29	5	31	5	24	6	36	4	15	7	45
26	7	39	4	21	6	27	5	33	5	21	6	39	4	13	7	47
27	7	37	4	23	6	25	5	35	5	19	6	41	4	11	7	49
28	7	34	4	26	6	23	5	37	5	17	6	43	4	9	7	51
29	7	32	4	28					5	15	6	45	4	7	7	53
30	7	30	4	30					5	12	6	48	4	5	7	55
31	7	28	4	32					5	10	6	50				

The Table *of the Sun's Riſing and Setting at* Edinburgh, Inverara, Copenhagen *and* Moſcow, *continu'd.*

Days.	May.				June.				July.				Auguſt.			
	Sun r.		Sun ſ.		Sun r.		Sun ſ.		Sun r		Sun ſ.		Sun r.		Sun ſ.	
	h.	m.	h.	m	h.	m.	h	m	h.	m	h.	m	h.	m.	h.	m.
1	4	3	7	57	3	21	8	39	3	32	8	28	4	25	7	35
2	4	1	7	59	3	21	8	39	3	33	8	27	4	27	7	33
3	3	59	8	1	3	20	8	40	3	34	8	26	4	29	7	31
4	3	58	8	2	3	20	8	40	3	36	8	24	4	31	7	29
5	3	56	8	4	3	20	8	40	3	37	8	23	4	34	7	26
6	3	54	8	6	3	20	8	40	3	39	8	21	4	36	7	24
7	3	53	8	7	3	19	8	41	3	40	8	20	4	38	7	22
8	3	51	8	9	3	19	8	41	3	41	8	19	4	40	7	20
9	3	49	8	11	3	19	8	41	3	43	8	17	4	43	7	17
10	3	47	8	13	3	19	8	41	3	44	8	16	4	45	7	15
11	3	45	8	15	3	19	8	41	3	45	8	15	4	47	7	13
12	3	44	8	16	3	19	8	41	3	47	8	13	4	50	7	10
13	3	42	8	18	3	19	8	41	3	49	8	11	4	52	7	8
14	3	40	8	20	3	20	8	40	3	51	8	9	4	54	7	6
15	3	39	8	21	3	20	8	40	3	52	8	7	4	56	7	4
16	3	37	8	23	3	20	8	40	3	54	8	6	4	58	7	2
17	3	36	8	24	3	20	8	40	3	56	8	4	5	0	7	0
18	3	34	8	26	3	21	8	39	3	58	8	2	5	2	6	58
19	3	33	8	27	3	21	8	39	3	59	8	1	5	5	6	55
20	3	32	8	28	3	22	8	38	4	1	7	59	5	8	6	52
21	3	31	8	29	3	22	8	38	4	3	7	57	5	11	6	49
22	3	30	8	30	3	23	8	37	4	5	7	55	5	14	6	46
23	3	29	8	31	3	24	8	36	4	7	7	53	5	16	6	44
24	3	28	8	32	3	24	8	36	4	9	7	51	5	19	6	41
25	3	27	8	33	3	25	8	35	4	11	7	49	5	21	6	39
26	3	26	8	34	3	26	8	34	4	13	7	47	5	23	6	37
27	3	25	8	35	3	27	8	33	4	15	7	45	5	25	6	35
28	3	24	8	46	3	28	8	32	4	17	7	43	5	27	6	33
29	3	23	8	37	3	29	8	31	4	19	7	41	5	29	6	31
30	3	22	8	38	3	30	8	30	4	21	7	39	5	31	6	29
31	3	22	8	38					4	23	7	37	5	33	6	29

The

The Table *of the Sun's Riſing and Setting at* Edinburgh, Inverara, Copenhagen *and* Moſcow, *continu'd.*

Days.	September.				October.				November.				December.			
	Sun r.		Sun ſ.		Sun r.		Sun ſ.		Sun r		Sun ſ.		Sun r		Sun ſ.	
	h	m.	h.	m	h	m.	h.	m.	h.	m.	h.	m.	h.	m.	h.	m.
1	5	35	6	25	6	44	5	16	7	54	4	6	8	38	3	22
2	5	38	6	22	6	46	5	14	7	56	4	4	8	38	3	22
3	5	4	6	20	6	48	5	12	7	58	4	2	8	39	3	21
4	5	42	6	18	6	50	5	10	8	0	4	0	8	39	3	21
5	5	44	6	16	6	52	5	8	8	2	3	58	8	39	3	21
6	5	46	6	14	6	55	5	5	8	4	3	56	8	40	3	20
7	5	48	6	12	6	57	5	3	8	6	3	54	8	40	3	20
8	5	50	6	10	6	59	5	1	8	8	3	52	8	40	3	20
9	5	53	6	7	7	2	4	58	8	10	3	50	8	41	3	19
10	5	55	6	5	7	5	4	55	8	11	6	49	8	41	2	19
11	5	57	6	3	7	7	4	53	8	13	3	47	8	41	3	19
12	6	0	6	0	7	9	4	51	8	15	3	45	8	40	3	20
13	6	2	5	58	7	12	4	48	8	16	3	44	8	40	3	20
14	6	4	5	56	7	14	4	46	8	18	3	42	8	40	3	20
15	6	7	5	53	7	16	4	44	8	19	3	41	8	39	3	21
16	6	9	5	51	7	18	4	42	8	20	3	40	8	39	3	21
17	6	11	5	49	7	20	4	40	8	21	3	39	8	38	3	22
18	6	13	5	47	7	23	4	37	8	23	3	37	8	38	3	22
19	6	15	5	45	7	25	4	35	8	25	3	35	8	37	3	13
20	6	18	5	42	7	27	4	33	8	27	3	33	8	37	3	23
21	6	20	5	40	7	30	4	30	8	28	3	32	8	36	3	24
22	6	23	5	37	7	32	4	28	8	29	3	31	8	36	3	24
23	6	25	5	35	7	34	4	26	8	30	3	30	8	35	3	25
24	6	27	5	33	7	36	4	24	8	31	3	29	8	35	3	25
25	6	30	5	30	7	39	4	21	8	32	3	28	8	34	3	26
26	6	32	5	28	7	41	4	19	8	33	3	27	8	33	3	27
27	6	34	5	26	7	43	4	17	8	34	3	26	8	32	3	28
28	6	37	5	23	7	45	4	15	8	35	3	25	8	31	3	29
29	6	39	5	21	7	47	4	13	8	36	3	24	8	30	3	30
30	6	41	5	19	7	49	4	11	8	37	3	23	8	29	3	31
31					7	51	4	9					8	28	3	32

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A Table *of the Sun's Riſing and Setting at theſe Places hereunder nam'd.*

The Month and the Day.		*Archangel.*				*Conſtantinople Boſton* in *New England.*				*Dublin*, and *York* in *Old England.*			
		☉ ri		☉ ſets		☉ ri.		☉ ſets		☉ ri		☉ ſet	
		h.	m.	h.	m.	h.	m	h,	m	h.	m	h.	m.
Jan.	10	9	18	2	42	7	18	4	42	7	56	4	4
Febr	10	7	32	4	28	6	40	5	20	6	58	5	2
March	10	5	58	6	2	5	59	6	1	5	59	6	1
April	10	4	16	7	44	5	15	6	45	4	55	7	5
May	10	2	38	9	22	4	41	7	29	4	2	7	58
June	10	1	37	10	23	4	26	7	34	3	37	8	23
July	10	2	33	9	27	4	39	7	21	3	59	8	1
Auguſt	10	4	12	7	48	5	14	6	46	4	52	7	8
Sept.	10	5	53	6	7	5	57	6	3	5	56	6	4
Octob.	10	7	33	4	27	6	40	5	20	6	59	5	1
Nov.	10	9	14	2	46	7	18	4	42	7	57	4	3
Dec.	10	10	23	1	37	7	34	4	26	8	23	3	37

The Month and the Day.		*Fort S. George* and *Barbadoes*				*Gibraltar* and *Virginia.*				*St. Helena.*			
		☉ ri.		☉ ſets		☉ ri.		☉ ſet		☉ ri.		☉ ſets	
		h.	m.	h.	m.	h	m.	h.	m	h.	m.	h.	m.
Jan.	10	6	19	5	41	7	2	4	58	5	36	6	24
Febr.	10	6	10	5	50	7	32	4	28	5	48	6	12
Mar.	10	6	00	6	00	5	59	6	1	6	0	6	0
April	10	5	49	6	11	5	24	6	36	6	14	5	46
May	10	5	40	6	20	4	57	7	3	6	24	5	36
June	10	5	37	6	23	4	45	7	15	6	28	5	32
July	10	5	40	6	20	4	56	7	4	6	24	5	36
Auguſt	10	5	48	6	12	5	23	6	37	6	14	5	46
Sept.	10	5	59	6	1	5	58	6	2	6	1	5	59
Octob.	10	6	10	5	50	6	32	5	28	5	48	6	12
Nov.	10	5	19	5	41	7	2	4	58	5	36	6	24
Dec.	10	6	23	5	37	7	15	4	45	5	32	6	28

A Table *of the Sun's Riſing and Setting at theſe Plac* *hereunder nam'd.*

The Month and the Day.		*Jamaica. S. Chriſtophers*				*Alexandria. Jeruſalem. Damaſcus. Hoaign. China.*				*Lisbon* and *Port-Mahon.*			
		☉ ri.		☉ ſet.		☉ ri.		☉ ſer.		☉ ri.		☉ ri.	
		h.	m.	h.	m.	h.	m.	h	m.	h	m.	h.	m.
Jan.	10	6	28	5	32	6	53	5	7	7	8	4	52
Febr.	10	6	14	5	46	6	27	5	33	6	34	5	26
March	10	6	00	6	00	5	59	6	1	5	59	6	1
April	10	5	44	6	16	5	29	6	31	5	21	6	39
May	10	5	32	6	28	5	6	6	54	4	51	7	9
June	10	5	27	6	33	4	56	7	4	4	38	7	22
July	10	5	31	6	29	5	5	6	55	4	50	7	10
Auguſt	10	5	35	6	25	5	28	6	32	5	20	6	40
Sept.	10	5	59	6	1	5	58	6	2	5	57	6	3
Octob.	10	6	15	5	45	6	28	5	32	6	35	5	25
Nov.	10	6	28	5	32	6	53	5	7	7	8	4	52
Dec.	10	6	33	5	27	7	4	4	56	7	22	4	38

The Month and the Day.		*Madrid.*				*Paris*, and *Vienna.*				*Petersburgh, Stockholm,* and *Revel.*			
		☉ ri.		☉ ſet.		☉ ri.		☉ ſet.		☉ ri.		☉ ſet.	
		h.	m.	h.	m.	h.	m	h.	m	h.	m.	h.	m.
Jan.	10	7	11	4	49	7	38	4	22	8	36	3	24
Febr.	10	6	36	5	24	6	49	5	11	7	16	4	44
March	10	5	59	6	1	5	59	6	1	5	58	6	2
April	10	5	19	6	41	5	5	6	55	4	35	7	25
May	10	4	48	7	12	4	20	7	40	3	21	8	39
June	10	4	34	7	26	4	1	7	59	2	42	9	18
July	10	4	46	7	14	4	26	7	34	3	17	8	43
Auguſt	10	5	18	6	42	5	3	6	57	4	32	7	28
Sept.	10	5	57	6	3	5	56	6	4	5	55	6	5
Octob.	10	6	37	5	23	6	50	5	10	7	16	4	44
Nov.	10	7	11	4	49	7	38	4	22	8	36	3	24
Dec.	10	7	26	4	34	7	59	4	1	9	16	2	44

A Table *of the Sun's Riſing and Setting at theſe* Places *hereaunder nam'd.*

The Month & the Day.		*Cape of Good Hope.*				*Aberdeen,*				*Babylon,*			
		☉ ri.		☉ ſets		☉ *ri.*		☉ ſets		☉ ri.		☉ ſets	
		h.	m.	h.	m	h.	m.	h.	m.	h.	m.	h.	m.
an.	10	5	3	6	57	8	16	3	44	6	58	5	2
Febr.	10	5	31	6	29	7	7	4	53	5	29	6	31
March	10	6	1	5	59	5	59	6	1	5	59	6	1
April	10	6	33	5	27	4	44	7	16	5	27	6	33
May	10	6	58	5	2	3	41	8	19	5	1	6	59
Inne	10	7	9	4	51	3	11	8	49	4	51	7	9
uly	10	6	59	5	1	3	38	8	22	5	0	7	0
uguſt	10	6	34	5	26	4	42	7	18	5	26	6	34
ent.	10	6	2	5	58	5	55	6	5	5	58	6	2
Octob.	10	5	30	6	30	7	8	4	52	6	26	5	34
Nov,	10	5	3	6	57	8	17	3	43	6	55	5	5
Dec.	10	4	59	7	3	8	49	3	11	7	9	4	51

The Month & the Day.		*Venice,*				*Teneriffe,*				*Greenland,*			
		☉ ri.		☉ ſets		☉ ri.		☉ ſets		☉ ri.		☉ ſets	
		h.	m.	h.	m.	h.	m.	h.	m.	h.	m	h,	m
an.	10	7	27	4	33	6	44	5	16	All		Night	
Febr.	10	6	44	5	16	6	23	5	37	11	23	0	57
March	10	5	59	6	1	5	59	6	1	5	55	6	5
April	10	5	11	6	49	5	35	6	25				
May	10	4	32	7	28	5	15	6	45				
une	10	4	15	7	45	5	7	6	53	All		Day,	
uly	10	4	30	7	30	5	14	6	46				
uguſt	10	5	9	6	51	5	34	6	26				
ept.	10	5	57	6	3	5	58	6	2				
Octob.	10	6	44	5	16	6	23	5	37	5	43	6	17
Nov,	10	7	27	4	33	6	44	5	16	☉ does not riſe here till *Feb.* 10,			
Dec.	10	7	45	4	15	6	53	5	7				

Of

Of the Sun's Riſing and Setting at Greenland.

BY the preceding Table you may ſee, the Sun riſes to *Greenland*, the 10*th* of *February*, 23 min. paſt 11, and ſets 37 min. paſt 12; and ſo continues to riſe and ſet till *April* 7; And then he appears in their Horizon at Midnight, and goes round them (once in 24 Hours) till *Auguſt* 14, when he begins to ſet; from that time, he riſes and ſets every Day till *October* 10; then he ſets for good and all; they ſee him no more till *Feb*, 10, following: So the Length of their longeſt Day is 128 of our Days; and their longeſt Night 122. Their ſhorteſt Day and Night are but a few Minutes.

There are two Places on the Globe (the Polar Horizons) where the Inhabitants (if there be any) have but one Day and one Night in a Year. The Sun riſes to thoſe who live directly under the North Pole the Ninth of *March*, and ſets the Twelfth of *September*: To thoſe under the South Pole, the Sun riſes the 12th of *September*. and ſets the 19th of *March*. The Sun's Altitude in either of theſe Places can never exceed 23 Degr. 30 Min. for that is the Sun's greateſt Declination from the Equinoctial Line, to either of the Tropicks of *Cancer* or *Capricorn*. By which you may perceive, the Sun can have but very faint Influence upon theſe Mountains of Ice, and frozen Seas! there arreſted by the tyrannical Winds of the Poles: Which Winds penetrate thro' the Bowels of the Hills, cloſing up the Pores of the Earth, forbidding her Pregnancy, congealing the liquid Element into Chryſtal Rocks, and ſolid Plains of Glaſs! Fiercely forbidding the flowing Obedience of the Ocean, to the Moon, and making the ſoft and nouriſhing Boſom of the Waters become the flinty Sepulchre of the finny Armies of the Deep.

The Explanation of the Six following Tables.

N the Table for the Sun's Place, look for the Month at the top, and for the Day in the ſide; under the Month, and ainſt the Day, you have the Degree and Minute of the n's Place in any of the twelve Signs. The firſt of *January* e Sun is in *Capricorn* 22 Degrees, 9 minutes; the firſt of *bruary*, 23 Degrees, 37 minutes in *Aquarius*; the 10th of *rch*, 38 minutes in *Aries*. See the *Table*.

The Names and Characters of the Twelve Signs.

Aries the Ram, ♈, *Taurus* the Bull, ♉, *Gemini* the Twins, , *Cancer* the Crab, ♋, *Leo* the Lion, ♌, *Virgo* the Virgin, , *Libra* the Ballance, ♎, *Scorpio* the Scorpion, ♏, *Sagitta-* *ius* the Archer, ♐, *Capricornus* the He-Goat, ♑, *Aquarius* the aterer, ♒, and *Piſces* the Fiſhes, ♓.

I only name the Signs here for the ſake of the Learner, t he may not be at a loſs to expreſs the Sun's Place in any theſe Signs or Conſtellations; for in the Tables they are nify'd by theſe Characters annex'd.

Of Day-break, Twilight, &c.

Look for the Month and the Day in the ſide, and againſt em to the Right, you have the Hour and Minute of Day-eak, Twilight, Day's length, Night's length. *Feb.* 20, Day eaks 39 min. after 4; the end of Twilight, (that is, after n-ſet) 21 min. after 7; Day's length 10 hours, 52 min. ght's length, 13 hours, 8 minutes.

Of the Equation of Time.

Look for the Month at the top of the Table, for the Day the ſide; in the Place of meeting you have the Difference Minutes and Seconds, between a good Clock and a true n-Dial. *Jan.* 26, the Difference is 14 minutes 54 ſeconds. e the *Table*.

A Table *of the Sun's Place throughout the Year.*

Days.	*Jan.*		*Febr.*		*March*		*April.*		*May.*		*June.*	
	☉ *in* ♑		☉ in ♒		☉ in ♓		☉ in ♈		☉ in ♉		☉ in ♊	
	°	′	°	′	°	′	°	′	°	′	°	′
1	22	9	23	37	21	41	22	17	21	23	21	6
2	23	10	24	37	22	41	23	15	22	21	22	3
3	24	11	25	38	23	41	24	14	23	19	23	0
4	25	12	26	38	24	40	25	13	24	16	23	57
5	26	13	27	39	25	40	26	11	25	14	24	55
6	27	14	28	36	26	39	27	10	26	12	25	52
7	28	15	29	40	27	39	28	8	27	10	26	49
8	29	17	0 ♓	40	28	39	29	7	28	7	27	46
9	0 ♒	18	1	40	29	38	0 ♉	5	29	5	28	43
10	1	19	2	41	0 ♈	38	1	3	0 ♊	2	29	41
11	2	20	3	41	1	37	2	2	1	0	0 ♋	38
12	3	21	4	41	2	36	3	0	1	58	1	35
13	4	22	5	42	3	36	3	59	2	55	2	32
14	5	23	6	42	4	35	4	57	3	53	3	29
15	6	24	7	42	5	34	5	35	4	50	4	27
16	7	24	8	42	6	44	6	53	5	48	5	24
17	8	25	9	42	7	33	7	51	6	45	6	21
18	9	26	10	42	8	32	8	50	7	43	7	18
19	10	27	11	42	9	31	9	48	8	40	8	15
20	11	28	12	43	10	30	10	46	9	37	9	12
21	12	29	13	43	11	29	11	44	10	35	10	10
22	13	30	14	42	12	28	12	42	11	32	11	7
23	14	30	15	42	13	27	13	40	12	30	12	4
24	15	31	16	42	14	26	14	38	13	27	13	1
25	16	32	17	42	15	25	15	36	14	24	13	58
26	17	33	18	42	16	24	16	34	15	21	14	56
27	18	33	19	42	17	23	17	32	16	19	15	53
28	19	34	20	42	18	22	18	30	17	16	16	50
29	20	35			19	21	19	28	18	14	17	47
30	21	35			20	19	20	25	19	11	18	44
31	22	36			21	18			20	8		

The Table *of the Sun's Place, continu'd.*

Days.	*July.*		*Auguſt.*		*Sept.*		*Octob.*		*Nov.*		*Dec.*	
	⊙ in ♋		⊙ in ♌		⊙ in ♍		⊙ in ♎		⊙ in ♏		⊙ in ♐	
	°	′	°	′	°	′	°	′	°	′	°	′
1	19	42	19	21	19	21	18	52	19	53	20	18
2	20	39	20	19	20	20	19	52	20	54	21	29
3	21	36	21	16	21	18	20	51	21	54	32	20
4	22	33	22	14	22	17	21	50	22	55	23	22
5	23	31	23	12	23	16	22	50	23	55	24	23
6	24	28	24	10	24	14	23	50	24	56	25	24
7	25	25	25	8	25	13	24	50	25	57	26	25
8	26	22	26	5	26	12	25	50	26	57	27	26
9	27	20	27	3	27	10	26	49	27	58	28	27
10	28	17	28	1	28	9	27	49	28	51	29	28
11	29	14	28	59	29	8	28	49	0 ♐	0	0 ♑	30
12	0 ♌	11	29	57	0 ♎	7	29	49	1	0	1	31
13	1	9	0 ♍	55	1	6	0 ♏	49	2	1	2	32
14	2	6	1	53	2	5	1	49	3	2	3	33
15	3	4	2	51	3	4	2	49	4	3	4	34
16	4	1	3	49	4	3	3	49	5	4	5	35
17	4	58	4	47	5	2	4	49	6	4	6	36
18	5	55	5	45	6	1	5	49	7	5	7	38
19	6	53	6	43	7	0	6	49	8	6	8	39
20	7	51	7	41	7	59	7	49	9	7	9	40
21	8	48	8	39	8	58	8	50	10	8	10	41
22	9	45	9	38	9	58	9	50	11	9	11	43
23	10	43	10	36	10	57	10	50	12	10	12	44
24	11	40	11	34	11	56	11	50	13	11	13	45
25	12	38	12	32	12	55	12	50	14	12	14	46
26	13	35	13	31	13	55	13	51	15	13	15	47
27	14	33	14	29	14	54	14	51	16	14	16	48
28	15	31	15	27	15	54	15	51	17	15	17	50
29	16	28	16	26	16	53	16	52	18	16	18	51
30	17	26	17	24	17	52	17	52	19	17	19	52
31	18	23	18	23			18	53			20	53

A Table *ſhewing Day-break, and the End of Twilight fo the Latitude of* London, *and the Length of Day an Night.*

Month and Day.		Day-break.		Twi-light.		Day's Length.		Night's Length.	
		h.	m.	h.	m	h.	m.	h.	m.
	1	5	52	6	8	8	0	16	0
January	10	5	44	6	16	8	24	15	36
	20	5	32	6	28	8	54	15	6
	1	5	13	6	47	9	38	14	22
February	10	4	57	7	3	10	12	13	48
	20	4	39	7	21	10	52	13	8
	1	4	19	7	41	11	26	12	34
March	10	4	0	8	0	12	4	11	56
	20	3	35	8	25	12	42	11	18
	1	3	4	8	56	13	28	10	32
April	10	2	40	9	20	14	0	10	0
	20	2	6	9	54	14	40	9	20
	1	1	23	10	37	15	14	8	46
May	10		14	11	36	15	42	8	18
	20	No Night, but Twilight.				16	4	7	56
	1					16	22	7	38
June	10					16	26	7	34
	20					16	22	7	38
	1					16	6	7	54
July	11	0	17	11	43	15	42	8	18
	20	1	20	10	40	15	18	8	42
	1	2	6	9	54	14	38	9	22
Auguſt	10	2	35	9	25	14	8	9	52
	20	3	5	8	55	13	30	10	30
	1	3	35	8	25	12	44	11	16
September	10	3	56	8	4	12	8	11	52
	20	4	18	7	42	11	28	12	32
	1	4	41	7	19	10	46	13	14
October	10	4	59	7	1	10	10	13	50
	20	5	15	6	45	9	32	14	28
	1	5	33	6	27	8	50	15	10
November	10	5	43	6	17	8	12	15	38
	20	5	54	6	6	7	58	16	2
	1	5	59	6	1	7	40	16	20
December	10	6	1	5	59	7	34	16	26
	20	6	1	5	59	7	42	16	18

A Table, *ſhewing Day-break, and the End of Twilight for the Latitude of* Edinburgh, *and the Length of the Day and Night.*

Month and Day.		*Day break*		*Twi-light*		*Day's Length.*		*Night's Length*	
		h.	m.	h	m.	h.	m.	h.	m
	1	5	59	6	1	7	10	16	50
January,	10	5	48	6	12	7	38	16	22
	20	5	33	6	27	8	10	15	42
	1	5	11	6	49	9	10	14	50
February	10	5	53	6	7	9	50	14	10
	20	4	30	7	30	10	38	13	22
	1	4	9	7	51	11	20	12	40
March	10	3	43	8	17	12	4	11	56
	20	3	12	8	48	12	52	11	8
	1	2	31	9	29	13	44	10	16
April	10	1	53	9	7	14	26	9	34
	20	0	53	11	7	15	8	8	52
	1	No Night, but Twilight, from *Apr.* 23, to *July* 29.				15	54	8	6
May	10					16	26	7	34
	20					16	56	7	4
	1					17	18	6	42
June	10					17	22	6	38
	20					17	16	6	44
	1					16	56	7	4
July	10					16	32	7	28
	20					15	58	8	2
	1	0	54	11	6	15	10	8	50
Auguſt	10	1	50	10	10	14	30	9	50
	20	2	33	9	27	13	44	9	16
	1	3	14	8	46	12	50	10	10
September	10	3	41	8	19	12	10	11	50
	20	4	8	7	52	11	24	12	36
	1	4	35	7	25	10	32	13	28
October	10	4	55	7	5	9	50	14	10
	20	5	15	6	45	9	6	14	54
	1	5	36	6	24	8	12	15	48
November	10	5	49	6	11	7	38	16	22
	20	6	0	6	0	7	6	16	54
	1	6	8	5	52	6	44	17	16
December	10	6	10	5	50	6	38	17	22
	20	6	8	5	52	6	46	17	14

A Table *of the* Equation of Time, *for Regulating Clocks and Watches*, &c.

Days.	Jan.		Febr.		March.		April.		May.		June.	
	′	″	′	″	′	″	′	″	′	″	′	″
	Clocks faſter than Dials.		Clocks faſter than Dials.		Clocks faſter than Dials.		faſter. ‖ Clocks ſlower than Sun Dials.		Clocks ſlower than Sun Dials.		ſlower. ‖ Clocks faſter than Sun Dials.	
1	9	10	15	0	10	16	0	48	4	8	1	1
2	9	34	14	59	9	58	0	32	4	10	0	49
3	9	56	14	57	9	40	0	16	4	11	0	37
4	10	15	14	52	9	22	0	0	4	13	0	25
5	10	34	14	48	9	4	0	15	4	11	0	12
6	10	55	14	43	8	46	0	30	4	9	0	0
7	11	14	14	38	8	28	0	44	4	8	0	14
8	11	33	14	30	8	10	0	58	4	6	0	26
9	11	52	14	22	7	52	1	10	4	5	0	40
10	12	9	14	15	7	34	1	24	4	3	0	54
11	12	24	14	6	7	14	1	37	4	0	1	8
12	12	40	13	57	6	54	1	49	3	56	1	23
13	12	55	13	49	6	36	2	1	3	51	1	36
14	13	10	13	40	6	19	2	11	3	46	1	49
15	13	22	13	30	6	0	2	22	3	40	2	0
16	13	35	13	20	5	40	2	32	3	34	2	12
17	13	46	13	10	5	20	2	41	3	27	2	22
18	13	58	13	0	5	0	2	51	3	20	2	35
19	14	8	12	48	4	40	3	1	3	12	2	46
20	14	17	12	36	4	20	3	10	3	3	2	58
21	14	25	12	24	4	1	3	19	2	54	3	9
22	14	31	12	11	3	44	3	27	2	45	3	20
23	14	36	11	57	3	23	3	35	2	36	3	31
24	14	42	11	42	3	5	3	40	2	26	3	42
25	14	46	11	36	2	48	3	45	2	17	3	53
26	14	54	11	10	2	30	3	50	2	6	4	12
27	14	54	10	52	2	13	3	50	1	57	4	12
28	14	56	10	34	1	55	4	0	1	46	4	21
29	14	59			1	37	4	3	1	35	4	31
30	15	0			1	20	4	6	1	23	4	40
31	15	0			1	4			1	12		

The Table *of the* Equation of Time, *for Regulating of Clocks and Watches,* &c. *continu'd.*

Days.	July.			Aug.			Sept.			Octob.			Nov.			Dec.		
	′		″	′		″	′		″	′		″	′		″	′		″
1	4		48	4		27	3		51	13		33	15		25	5		38
2	4	Clocks	56	4	Clocks	16	4	Clocks	2	13	Clocks	47	15	Clocks	22	5	Clocks	11
3	5		3	4		5	4		14	14		00	15		12	4		44
4	5		10	3		54	4		56	14		12	15		03	4		07
5	5		16	3		42	5		17	14		24	14		52	3		48
6	5		21	3		30	5		38	14		35	14		40	3		20
7	5	faſter	26	3	faſter	18	6	ſlower	00	14	ſlower	45	14	ſlower	27	2	ſlower	50
8	5		31	3		3	6		22	14		55	14		13	2		19
9	5		34	3		50	6		42	15		04	13		58	1		48
10	5		37	2		37	7		04	15		13	13		42	1		16
11	5		40	2		28	7		24	15		22	13		25	0		44
12	5	than	42	2		8	7	than	45	15		32	13		07	0		12
13	5		44	2		53	8		04	15	than	40	12	than	48	0	=	21
14	5		45	1		38	8		24	15		47	12		29	0		51
15	5		46	1		24	8		44	15		52	12		10	1	Clocks	21
16	5		48	1		9	9		03	15		56	11		50	1		51
17	5	Sun	48	0		52	9	Sun	23	16	Sun	00	11	Sun	30	2		21
18	5		48	0		38	9		43	16		04	11		10	2		51
19	5		47	0		17	10		02	16		03	10		49	3		21
20	5		45	0	=	0	10		20	16		07	10		28	3		50
21	5	Dials.	40	0		18	10	Dials.	40	16	Dials.	08	10	Dials.	04	4	faſter	18
22	5		36	0		36	10		58	16		09	9		40	4		47
23	5		30	0	ſlower.	55	11		16	16		09	9		14	5		13
24	5		26	1		14	11		35	16		09	8		48	5		40
25	5		20	1		30	11		54	16		08	8		21	6		08
26	5		15	1		47	12		12	16		06	7		53	6		35
27	5		8	2		7	12		30	16		02	7		25	7		00
28	5		0	2		27	12		47	15		57	6		58	7		29
29	4		53	2		48	13		04	15		51	6		31	7		53
30	4		46	3		8	13		20	15		45	6		04	8		17
31	4		35	3		37				15		37				8		41

A Table *of the* Moon's *Southing and Shining ; by whic may be readily found her* Riſing *and Setting.*

TO find the Moon's Southing, enter the firſt Column wit the Moon's Age ; and againſt it in the next Column o the Right Hand, is the tim of her Southing ; whic time is in the Afternoon, i the Moon be under 15 Day old ; but if more, the tim is in the Morning.

The Moons Age.		*Time of South*		*The Moons Age.*		*Time of Shin*	
1	16	0	48	1	29	0	48
2	17	1	36	2	28	1	35
3	18	2	24	3	27	2	24
4	19	3	12	4	26	3	12
5	20	4	00	5	25	4	00
6	21	4	48	6	24	4	48
7	22	5	36	7	23	5	36
8	23	6	24	8	22	6	24
9	24	7	12	9	21	7	12
10	25	8	00	10	20	8	00
11	26	8	48	11	19	8	48
12	27	9	36	12	18	9	36
13	28	10	24	13	17	10	24
14	29	11	12	14	16	11	12
15	30	12	00	15	15	12	00

Example 1. *Jan.* 1 1734, the Moon is 24 Day old, which gives the tim of her Southing 7 Hour 12 Minutes in the Mor ing.

Example 2. *Auguſt* 2 1734, the Moon is 12 Da old ; which I ſeek in th firſt Column, and right a gainſt it in the 2*d* Colum is 9 Hours 36 Min. whic tells me, ſhe is South 3 Minutes paſt 9 at Night.

To find the Time of the Moon's Riſing.

Rule. If the Moon be under 16 Days old, add the tim of her ſhining (which you'll find againſt her Age in the Ta ble) to the time of Sun-riſing : But if ſhe decreaſe, that i when ſhe is above 15 Days old, ſubtract the time of her ſhi ning from the time of Sun-riſing, gives the time of he Riſing.

The Moon's Riſing and Setting continu'd.

Example. JAN 6, 1734, the Moon is 12 Days old; which gives her time of Shining to be 9 Hours, 36 Minutes: This added to 7 Hours, 54 Minutes, the time of Sun-riſing at *London*, gives 5 Hours, 30 Minutes after Noon, the time of Moon-riſing.

To find the time of Moon-ſetting.

If the Moon increaſe in Light (as ſhe does the firſt 15 Days) add the time of her Shining to that of the Sun-ſetting; but if ſhe decreaſe, ſubtract the time of her Shining (found in the foregoing Table) from the Sun-ſetting, the Remainder is the time of her ſetting.

Example. *Jan.* 6, 1734, the Moon is 12 Days old, gives her Shining 9 h. 36 m. which added to the time of Sun ſetting at *London*, gives 13 h. 42 m. that is, 42 min. paſt 1 next Morning, the time of the Moon-ſetting.

Note, Theſe Rules are not perfectly true, by reaſon they ſuppoſe the Moon's Orbit to be a perfect Circle, lying in the Plane of the Ecliptic, and ſo free from Latitude, with a Motion every Day alike: For when ſhe has great North Latitude, and in Apogeon, ſhe will riſe more than an Hour and 40 Minutes ſooner than by the Rules above: And when ſhe has great South Latitude, and in Perigeon, ſhe will riſe later in the Northern Hemiſphere, by more than an Hour and 40 Min. So the ſame will happen in the time of Setting. However, theſe Rules will give the Reader an Idea of the Moon's Motion.

A Table *of the Moon's Place every Day at Noon for*
Year 1734.

Days	January.			February.			March.			April.		
	S.	°	'	S.	°	'	S.	°	'	S.	°	'
1	0	18	42	2	11	20	2	22	10	4	14	30
2	1	2	34	2	25	34	3	06	12	4	28	00
3	1	16	40	3	09	54	3	20	14	5	11	11
4	2	1	04	3	24	16	4	04	08	5	24	12
5	2	15	43	4	08	32	4	17	58	6	07	00
6	3	00	50	4	22	40	5	01	30	6	19	32
7	3	15	16	5	06	30	5	15	00	7	01	54
8	3	29	51	5	19	56	5	28	12	7	14	06
9	4	14	22	6	03	04	6	11	04	7	26	08
10	4	28	26	6	15	44	6	23	17	8	08	04
11	5	12	06	6	28	10	7	05	20	8	19	55
12	5	25	12	7	10	16	7	18	10	9	01	46
13	6	07	51	7	22	10	8	00	04	9	13	38
14	6	20	26	8	03	56	8	11	56	9	25	40
15	7	02	22	8	15	44	8	23	44	10	07	52
16	7	14	14	8	27	32	9	05	34	10	20	24
17	7	26	03	9	09	34	9	17	32	11	03	15
18	8	07	46	9	21	50	9	29	47	11	16	33
19	8	29	35	10	04	21	10	12	20	0	00	14
20	9	01	33	10	17	15	10	25	14	0	14	22
21	9	13	45	11	00	24	11	08	34	0	28	58
22	9	25	08	11	13	54	11	22	16	1	13	47
23	10	08	50	11	27	38	0	06	20	1	28	36
24	10	21	46	0	11	36	0	20	40	2	13	44
25	11	04	54	0	25	19	1	05	10	2	28	13
26	11	18	17	1	09	50	1	19	46	3	13	12
27	0	01	47	1	24	58	2	04	16	3	27	26
28	0	15	50	2	08	04	2	18	44	4	11	10
29	0	29	16				3	02	58	4	24	52
30	1	13	10				3	17	04	5	08	08
31	1	27	12				4	00	52			

The Table of *the Moon's Place every Day at Noon, for the Year* 1734, *continu'd.*

Day.	May. S.	°	′	June. S.	°	′	July. S.	°	′	Auguſt. S.	°	′
1	5	21	04	7	07	40	8	10	20	9	24	36
2	6	03	46	7	19	38	8	22	12	10	06	44
3	6	16	14	8	01	30	9	04	06	10	19	16
4	6	28	30	8	13	24	9	16	05	11	01	51
5	7	10	28	8	25	14	9	28	07	11	14	38
6	7	22	31	9	07	10	10	10	21	11	27	36
7	8	04	36	9	19	08	10	22	41	0	10	44
8	8	16	30	10	01	10	11	05	10	0	24	04
9	8	28	22	10	13	18	11	17	51	1	07	32
10	9	10	16	10	25	40	0	00	42	1	21	16
11	9	22	14	11	08	10	0	13	50	2	05	12
12	10	04	18	11	20	56	0	27	11	2	19	23
13	10	16	32	0	04	00	1	10	54	3	03	50
14	10	29	01	0	17	27	1	24	58	3	18	26
15	11	11	48	1	01	18	2	09	24	4	03	08
16	11	24	58	1	15	40	a	24	10	4	17	46
17	0	08	32	2	00	24	3	09	10	5	02	18
18	0	22	38	2	15	26	3	24	16	5	16	26
19	1	07	10	3	00	44	4	09	18	6	00	14
20	1	22	06	3	15	59	4	24	03	6	13	38
21	2	07	14	4	01	04	5	08	22	6	26	32
22	2	22	30	4	15	50	5	22	14	7	09	05
23	3	07	40	5	00	06	6	05	36	7	21	20
24	3	22	36	5	13	52	6	18	30	8	03	21
25	4	07	06	5	27	10	7	00	58	8	15	15
26	4	21	10	6	09	58	7	13	10	8	27	00
27	5	04	48	6	22	26	7	28	07	9	08	51
28	5	17	58	7	04	40	8	07	00	9	20	48
29	6	00	48	7	16	40	8	18	48	10	02	58
30	6	13	20	7	28	21	9	00	46	10	15	16
31	6	25	34				9	12	31	10	27	52

The Table *of the Moon's Place every Day at Noon* fo *the Year* 1734.

Days.	September			October.			November			December.		
	S.	°	'	S.	°	'	S.	°	'	S.	°	'
1	11	10	43	0	15	54	2	07	40	3	16	26
2	11	23	50	0	29	5	2	22	30	4	01	24
3	0	07	08	1	14	00	3	07	16	4	16	10
4	0	20	40	1	28	17	3	21	54	5	00	26
5	1	04	21	2	12	40	4	06	14	5	14	17
6	1	18	11	2	26	59	4	20	16	5	27	40
7	2	02	06	3	11	14	5	04	00	6	10	30
8	2	16	08	3	25	40	5	17	27	6	23	21
9	3	00	12	4	09	26	6	00	36	7	05	48
10	3	14	23	4	23	16	6	13	21	7	18	04
11	3	28	30	5	07	00	6	26	11	8	00	10
12	4	12	50	5	20	30	7	08	42	8	12	12
13	4	26	58	6	03	50	7	21	03	8	24	8
14	5	11	00	6	17	05	8	03	14	9	06	7
15	5	24	46	6	29	47	8	15	21	9	18	0
16	6	08	16	7	12	26	8	27	23	9	29	57
17	6	21	28	7	24	52	9	09	22	10	11	56
18	7	04	22	8	07	07	9	21	17	10	23	59
19	7	16	54	8	19	11	10	03	12	11	6	7
20	7	29	10	9	01	09	10	15	11	11	18	27
21	8	11	14	9	13	12	10	27	16	0	0	57
22	8	23	09	9	24	53	11	09	34	0	13	46
23	9	05	00	10	06	50	11	21	07	0	22	56
24	9	16	50	10	18	56	0	05	00	1	10	31
25	9	28	47	11	01	16	0	18	20	1	24	38
26	10	10	53	11	13	52	1	02	05	2	9	11
27	10	23	14	11	26	51	1	06	22	2	24	13
28	11	05	54	0	10	17	2	01	04	3	9	28
29	11	18	56	0	24	06	2	16	18	3	24	53
30	0	02	13	1	08	20	3	01	17	4	10	6
31				1	22	54				4	25	4

To find the Moon's Place any Day in any Year propos'd, paſt, or to come, according to her Middle Motion.

The yearly motion of the Moon *found by the* Epact *to be added to the ☽'s Place any Day in the Year* 1734.

The EPACT.	S.	D.	M
17	4	12	41
28	8	25	23
9	1	08	04
20	5	20	46
1	10	03	27
12	2	06	09
23	6	28	50
4	11	11	31
15	3	24	13
26	8	06	54
7	0	19	36
18	5	02	17
29	9	14	58
11	1	27	40
22	6	10	21
3	10	23	03
14	3	05	44
25	7	18	26
6	0	01	07

FIrſt, find the Epact for the Year propos'd; then add the Numbers againſt the Epact in this Table, to the Moon's Place in the Table beforegoing, and the Sum is the Moon's Place on the Day propos'd. For Example: What's the Moon's Place the 13th day of *April* 1735?

First, I look for the Epact, in the Table, Page 21; and I find it to be 17, for the ſaid Year; and the Numbers againſt it in this Table are 4 Signs, 12 Degrees, 41 Minutes; which being added to the ☽'s Place the 13th of *April* the Year 1734, gives the ☽'s Place requir'd.

	S.	D.	M.
Moon's Place *April* 13, 1734,	9	13	38
Moon's Yearly Motion,	4	12	41
Moon's Place *April* 13, 1735,	1	26	19

Example 2. I demand the Moon's Place *September* 8, 1740?

Sept. 8, 1734, ☽ at Noon	2	16	8
Epact 12, Motion to be added,	2	6	9
	4	22	17
The Motion of a Day added, it being Leap-Year,	0	13	11
Moon's Place 1740,	5	3	28

Example 3. I would know the ☽'s Place *Auguſt* 24, 1730?

Auguſt 24, 1734, ☽ at *Noon* in	8	3	21
Epact 22, Yearly motion add	6	10	21
☽'s Place *Aug.* 24, 1730	2	13	42

In this ſort of Calculation, the Signs muſt be thus numberd:

♈ 0, ♉ 1. ♊ 2, ♋ 3, ♌ 4, ♍ 5, ♎ 6, ♏ 7, ♐ 8, ♑ 9, 10, ♓ 11.

A

A Table *of the Latitudes and Differences of Meridians of the following Place's from* London.

The Names of Places.	*Latitud* D.	m.	*Differ.* h.	m.	
Aſterdam in *Holland*,	52N.	29	0	21	Noon ſooner than at *London.*
Archangel,	64	30	2	42	
Antwerp, in *Flanders*,	51	12	0	17	
Alexandria in *Ægypt*,	31	7	2	42	
Babylon in *Turkey. Aſia*,	34	30	3	56	
Berlin in *Germany*,	52	33	0	54	
Cape of Good Hope,	34S.	15	1	8	
Conſtantinople, in *Europe*,	43N	00	2	7	
Copenhagen in Denmark,	55	43	0	50	
Fort St. George, in the *Eaſt Indies*,	13	8	5	24	
Greenland,	79	5	0	43	
Hanover in *Germany*,	52	35	0	40	
Hoaignam in *China*	33	35	7	56	
Jruſalem in *Aſia minor*,	32	30	2	22	
Moſcow in *Moſcovy*,	55	25	2	38	
Oſtend in *Flanders*,	51	11	0	12	
Paris in *France*,	48	51	0	10	
Petersburgh in the Gulf of *Finland*,	60	4	2	36	
Port-mahon in *Minorca*	39	45	0	16	
Revel in *Finland*,	56	13	1	36	
Rome in *Italy*,	41	50	0	52	
Stockholm in *Sweden*,	59	30	1	10	
Venice, in *Italy*	45	15	1	4	
Vienna in *Germany*,	45	14	1	1	
Warſaw in *Poland*,	52	14	1	27	
LONDON, the Grand Meridian.	51	32			
Aberdeen in *Scotland*,	57N.	6	0	7	Noon later.
Barbadoes,	13	2	3	57	
Boſton in *New England*,	42	24	4	45	
Dublin in *Ireland*,	53	0	0	28	
Edinburgh in *Scotland*,	56	20	0	12	
Gibraltar in *Spain*,	36	7	0	25	
Glaſcow in *Scotland*,	45	30	0	17	
Virginia, Cape Charles	37	47	4	7	
Inverara, Argyle ſhire,	56	30	0	20	
Jamaica,	18	25	5	4	
Lisbon in *Portugal*,	38	42	0	37	
Madrid in *Spain*	40	10	0	13	
Teneriff, Canary	27	56	1	8	

The Changes and Eclipſes truly calculated for 30 Years compleat, for the Meridian of London; *and by help of the preceding* Table, *may ſerve for the Meridian of any of theſe Places therein inſerted.*

The Changes *Explain'd.*

YOU have nothing to do here, but to look for the Year and the Month in the firſt Column on the Left hand, and in the other four Columns, to the Right, you have the Day, Hour and Minute of New Moon, firſt Quarter, Full Moon and laſt Quarter.

Example 1, for 1734. Having found the Year, I look for *January*, which I find in the firſt Column, and againſt it, in the ſecond Column, I find it's Full Moon 25 min. paſt 5, the 9th Day; New Moon the 23d Day, 23 min. paſt 11, Night; Firſt Quarter, the 31ſt Day, 21 min. paſt 8.

Example 2, for *December*, 1735. Having found the Year and the Month, I find againſt *December*, and under the Title *Laſt Quarter*, 25-12-21, the Day, Hour and Minute of Laſt Quarter: In the next Column, I find 3 7-32, the Day, Hour and Minute of New Moon. In the 4th I ſee 10-4-30, the Day, Hour and Minute of the Firſt Quarter. In the 5th Column you have Full Moon 26 min. paſt 1, the 18th Day, Morning.

Example 3, for 1736. I demand the Day, Hour and Minute of the New Moon in *January*? Againſt *Jan.* in the next Column, to the Right, I find, the Moon changes 10 min. paſt 1, the 2d Day, Morning; the next New Moon happening in the ſame Month, you'll find it coupled with the Firſt, in the ſame Column, *Jan*. 31-8-15.

Note (m.) ſignifies Morning and (*a.*) Afternoon.

Of the ſeveral ſorts of Eclipſes, *and their Cauſes.*

THE Word *Eclipſe,* in general, ſignifies a Deprivation of Light. The Eclipſe of the *Sun,* (or rather of the Earth) is cauſed by the Interpoſition of the *Moon* between him and our ſight, and can never happen, but at the Change, or Conjunction, when they are leſs than 18 Degrees diſtant, either before, or after the *Moon*'s Nodes.

The *Moon*'s Eclipſe is cauſed by the Interpoſition of the Earth between the *Sun* and *Moon* ; which never happens, but at the Full Moon, and when ſhe is within twelve Degrees of either Node.

There are four ſorts of Eclipſes, *viz.* 1. Partial ; 2. Central and Annular ; 3. Total without Continuance ; 4. Total with Continuance.

1. Partial, is when ſome part of the *Sun*'s, or *Moon*'s Body is Obſcur'd, or leſs than twelve Digits.

2. *Annular,* is when at the Conjunction, or Interlunium, the *Moon* happens near her Apogeon, or greateſt diſtance from the Earth, and when the Sun is ſomewhere in the lower part of his Orbit, towards his Perigeon, or leaſt Diſtance from the Earth ; at which time the Sun's apparent Diameter will be conſiderably greater than the *Moon*'s ; and they being apparently concentrick, there will be ſeen a Ring of Light round the *Moon*'s Body. Such an Eclipſe ſeldom happens.

3. *Total* without Continuance, is when the Apparent Diameters of the *Sun* and *Moon* are equal, or of the *Moon* and Shadow of the Earth.

4. *Total* with Continuance. The *Sun* may be ſomewhat Eclipſed above twelve Digits ; but cannot continue totally dark above five Minutes. But the *Moon*'s Eclipſe ſometimes amounts to 23 Digits ; all above 12, ſhews her Continuance Totally dark.

There can be no leſs than Two, nor more than Six Eclipſes of the *Sun* and *Moon* in one Year ; and when Two, they are both of the *Sun.*

The Eclipſes Explain'd.

As the Word *Digit*, is made uſe of to ſignify the quantity f an Eclipſe, it will be proper here to acquaint the Learner, ow it is to be underſtood.

Digit, properly a Finger's breadth, in Aſtronomy the 12*th* art of the Diameters of the Sun and Moon.

Note, the following Eclipſes are Calculated to the middle f the time of Obſcuration ; ſo that an Obſerver may begin is Obſervation as follows.

	h.	*m.*	*dig.*		
	0	50	3	1 quarter	The quantity Eclipſed.
egin to obſerve	1	20	6	Half	
efore the time	1	30	9	3 quarters	
nnexed in the	1	34	12	Total	h. m.
ollowing Tables	1	36	23	Continue totally dark	1 36

Example. I wou'd obſerve an Eclipſe of the Moon in the ear 1735 *Sept.* 21, 33 Minutes paſt 1 in the Morning ; the uantity being near 6 *Digits*, I begin my Obſervation at 12 the Clock, that is, an hour and 20 min. before the time nnexed. Now look in the Table of the Difference of eridians, Page 54, and you'll ſee this Eclipſe muſt be obrved at *Conſtantinople* 2 hours, 7 min. ſooner, its Longitude ing above 30 Degrees Eaſt from *London.* And at *Inverara* *Argyleſhire*, 20 min. later, it being 5 Degrees Weſt from *ondon.* For every Degree in Longitude gives 4 Minutes in ime.

There will be two Total Eclipſes of the ☽ 1736; the firſt them 25 min. after 11 at Night, 15*th* of *March*, Digits 22. Here the Moon will continue Totally Dark above an ur and a quarter. There will be a great Eclipſe of the n the 18*th* of *Feb.* 1737, 4 min. paſt 3, near 11 Digits. See e Table.

Note, That the Moon's Eclipſe is Univerſal as to it it's antity and duration ; the Sun's Eclipſe is only ſeen from me particular places on the Earth where the Moon's adow falls at that time.

1734
Jan.
Feb.
Mar.
Apr.
May
June
July
Aug.
Sept.
Oct, {
Nov.
Dec.

In 173
part of
and the

1735
Jan.
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Apr.
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Nov.
Dec

In 173
invis. 2
of ☽. vi
past 1, M

1734	Full ☽			Laſt Qu.			New ☽			Firſt Qu.		
	d	h	′	d	h	′	d	h	′	d	h	′
Jan.	09	05	25 m	16	2	20 m	23	11	22 a	31	8	21 m
Feb.	07	05	22 a	15	2	15 m	22	01	32 a	01	10	31 a
Mar.	09	07	30 m	16	4	25 a	24	00	51 m	31	9	50 m
Apr.	07	06	48 a	15	3	45 m	22	10	04 m	29	7	02 a
May	07	04	00 m	14	1	00 a	21	05	38 a	29	2	36 m
June	05	11	20 m	12	8	36 a	20	00	41 m	27	9	40 m
July	04	06	38 a	12	3	40 m	19	07	58 m	26	4	55 a
Aug.	03	01	54 m	10	10	51 m	17	04	35 a	25	1	34 m
Sept.	02	10	32 m	09	6	00 m	16	03	56 m	23	0	58 a
Oct,	01	05	00 a	09	2	01 m	15	06	21 a	23	3	21 m
	30	00	20 a									
Nov.	29	05	10 m	06	9	13 a	14	11	34 m	21	8	40 a
Dec.	29	00	34 m	06	2	50 a	14	06	29 m	21	4	00 a

In 1734, Two Eclipſes, both of the Sun, inviſible to any part of *Great Britain* ; the firſt is *Apr.* 22, at 10 Morning, and and the other is *Oct.* 15, 21 min. paſt 6 at Night,

1735	Laſt Qu.			New ☽			Firſt Qu.			Full ☽		
	d	h	′	d	h	′	d	h	′	d	h	′
Jan.	5	09	34 m	13	01	58 m	20	10	55 m	27	07	50 a
Feb.	4	04	00 m	11	07	52 a	19	4	19 m	26	01	0 a
Mar	5	10	01 a	13	11	26 m	20	8	20 a	28	05	10 m
Apr.	4	02	12 a	11	10	58 a	19	7	5 m	26	04	20 a
May	3	13	07 a	11	10	07 m	18	7	10 a	26	04	5 m
June	2	01	12 a	9	5	48 a	17	2	40 m	24	11	16 m
July	1	08	40 a	9	0	37 m	16	9	27 m	23	06	25 a
	31	03	09 m									
Aug.	29	10	10 m	7	7	34 m	14	4	30 a	22	01	25 m
Sept.	27	07	16 a	5	4	24 a	13	1	16 m	20	10	21 m
Oct.	27	05	27 m	5	2	40 m	12	11	19 m	19	08	26 a
Nov.	25	07	12 a	3	4	14 a	11	1	15 m	18	10	1 m
Dec	25	10	21 m	3	7	32 m	10	4	30 a	18	01	26 m

In 1735, Four Eclipſes : 1*ſt*, of ☽, *Mar.* 27. 41′ paſt 10, M. inviſ. 2*d*, of ☉, *April* 11, 58 min. paſt 10, Night, inviſ. 3*d*, is of ☽. viſible near 6 Digits on the lower ſide, on *Sept.* 21,33′ paſt 1, M. 4*th* of ☉, inviſible, *Oct.* 5, 40′ paſt 2, morn.

1736	New ☽			Firſt Qu.			Full ☽			Laſt Qu.		
	d.	h.	′	d.	h.	′	d.	h.	′	d.	h.	′
Jan.	2	1	10m.	9	10	8m.	16	7	6a.	24	16	0m.
	31	8	15a.									
Feb.				8	5	12m.	15	2	5a.	22	11	5a.
Mar.	1	3	10a.	9	0	6m.	16	9	11m.	23	6	1a.
	31	7	20m.									
Apr.	29	9	47a.	7	4	18a.	13	3	15m.	22	10	3m.
May	29	8	55m.	7	6	45m.	14	3	40a.	22	0	31m.
June	27	5	5a.	5	5	50a.	13	2	50m.	20	11	10m.
July	27	4	12m.	5	2	0m.	12	11	6m.	19	8	9a.
Aug.	25	9	20m.	3	10	10m.	10	7	2a.	18	4	11m.
Sept.	23	5	40a.	1	6	28a.	9	3	26m.	16	0	20a.
Oct.	23	2	29m.	30	2	31m.	8	11	12m.	16	10	8m.
Nov.	21	2	38a,	28	11	35a.	7	1	10a.	14	10	15a.
Dec.	22	5	27m.	30	2	26m.	7	5	0m.	14	2	50a.

In 1736, Six Eclipſes, 2 viſible, both of the ☽, total. *1ſt*, ☽, *Mar.* 1, 2h. 36′ a. *2d Mar.* 15, ☽, 11h. 52′ dig. 22 Aft; *3d Mar.* 31, 7 h. 2′ Mor. ⊙, inviſ. *4th* of the ⊙, *Aug.* 25, 9 h. 30′ m. *5th* of the ☽, *Sept.* 9, 2 h. 24′ m. Dig. 21. *6th Sept.* 23, 5 h. 44′ a. inviſ. as alſo is the other of the ⊙.

1737	Full ☽			Laſt Qu.			New ☽			Firſt Qu.		
	d.	h.	′	d.	h		d	h.	′	d.	h.	′
Jan.	5	7	0a.	8	4	1m.	19	8	50a.	27	5	40m.
Feb.	3	2	55a.	10	11	59a.	18	2	9a.	25	11	9a.
Mar.	5	8	7m.	12	5	20a.	20	1	6m.	27	5	6a.
Apr.	4	2	15m.	11	11	8m.	19	0	18m.	26	9	16m
May	3	6	12a.	11	3	1m	18	3	47a.	26	0	45m.
June	2	9	40m.	9	6	25a.	17	3	55m.	24	0	50a.
July	1	9	48a.	9	6	12m.	16	3	3a.	24	0	0m.
	31	9	8m.									
Aug.	29	6	31a.	7	6	19a.	15	0	58m.	22	9	51m
Sept	28	3	24m.	6	3	10m.	13	9	56m.	20	6	41a.
Oct.	27	1	25a.	5	0	7m.	12	7	10a.	20	4	30m
Nov	25	11	14a.	3	10	11a.	11	5	8m.	18	2	12a.
Dec.	25	8	7m.	3	8	5m.	10	2	4a.	17	11	1a.

In 1737, Four Eclipſes, 1. Of the ⊙ viſ. great, on *Feb.* 18, 3 h. 4′ A. Digits 11 on the upper ſide. *2d. Mar.* 5. 0 h. 35′ ☽, inviſ. *3d. Aug.* 15, 0 h. 58′ ⊙, inviſ. *4th. Aug.* 29, 3 h. 44′ viſible ☽, mor, 5 Digits on the upper ſide.

1738	Laſt Qu.			New ☽			Firſt Qu.			Full ☽		
	d.	h	'	d.	h	'	d.	h.	'	d.	h.	'
Jan.	1	5	5 a.	9	5	31 m.	16	2	30 a.	23	11	20 a.
	31	8	20 m.									
Feb.	29	8	8 a.	7	5	57 a.	15	2	37 m	22	11	31 m.
Mar.	1	8	8 a.	9	9	37 m.	16	6	35 a.	24	3	21 m.
	31	0	22 a.									
Apr.	30	4	11 m.	8	1	50 m.	15	10	42 m	22	7	35 a.
May	29	5	8 a.	7	4	38 a.	14	11	32 a.	22	8	17 a.
June	28	10	16 a.	6	7	6 m.	13	4	7 a.	21	1	13 a.
July	28	1	14 m.	5	10	47 a.	13	7	47 m.	20	4	42 a.
Aug.	27	2	19 m.	4	11	46 m.	12	8	43 m.	19	5	30 m.
Sept.	25	3	10 m.	3	0	51 m.	10	9	50 m	17	6	26 a.
Oct.	24	2	5 a.	2	11	4 m	9	8	0 a.	17	5	5 m.
				31	8	48 a.						
Nov.	23	7	7 m.	30	6	14 m.	8	5	6 m	15	2	6 a.
Dec.	22	9	1 m.	29	5	10 a.	7	3	3 a.	15	0	8 m.

In 1738, Two Eclipſes, and both of the Sun: 1*ſt*, *Feb.* 7, 5h. 57' Aftern. inviſ. 2*d*, *Aug.* 4, 11 h. 3' Morn. viſible 4 Digits on the lower ſide.

1739	Firſt Qu.			Full ☽			Laſt Qu.			New ☽		
	d.	h.	'	d.	h.	'	d.	h.	'	d.	h	'
an.	6	2	10 m	13	10	11 m	20	8	0 a	28	4	4 m
Feb.	4	1	4 a	11	10	12 a	19	7	5 m	26	4	53 a
Mar.	6	1	50 m	13	10	23 m	20	7	40 a	28	4	57 m
Apr.	4	1	57 a	11	10	48 a	19	7	12 m	26	7	8 m
May	3	4	8 a	11	1	7 m	19	10	0 m	26	8	52 m
une	2	5	52 m	10	2	45 a	17	11	40 a	25	0	30 m
uly	2	9	30 m	9	6	15 a	17	3	21 m	24	3	52 a
Aug.	1	0	51 m	9	9	13 m	16	6	17 a	23	7	10 m
	31	4	5 m									
Sept.	29	5	10 m	7	1	19 a	14	10	20 a	21	8	36 a
Oct.	29	6	30 m	6	2	0 a	13	11	1 a	21	9	32 m
Nov.	26	6	38 a	5	3	26 a	13	0	24 m	19	9	38 m
Dec.	26	6	23 a	4	3	17 m	11	0	27 a	19	9	23 m

In 1739, Five Eclipſes: 1*ſt*, *Jan*. 13, 10 h. 54' a. ☽, viſible, Digits on the upper ſide: 2*d*, *Jan.* 28, 4 h. 4' m. ⊙, inviſ. , *July* 9, 4 h. 18 *aft*, ☽, inviſ. 4*th*, *July* 24, 4 h. 23' m. ⊙, ſible 7 Digits on the upper ſide, 5*th*, *Dec.* 19, 8 h. 49' Sun, ſible 2 Digits on the upper ſide.

1740	Full ☽				Laſt Qu.				New ☽				Firſt Qu.			
	d	h.	′		d	h.	′		d.	h.	′		d.	h.	′	
Jan.	3	3	20	m	11	0	19	m	17	8	7	a	25	5	11	a
Feb.	1	2	1	a	8	11	3	a	16	5	48	m	23	2	40	a
Mar.	1	11	7	a	9	8	6	m	16	3	37	a	24	0	31	m
	31	9	30	m												
Apr.	29	7	20	a	7	6	25	a	15	1	45	m	22	10	41	m
May	29	7	8	m	7	4	32	m	14	1	43	a	21	10	35	a
June	27	8	17	a	5	4	8	a	13	2	20	m	20	11	20	m
July	27	10	8	m	5	5	16	m	12	4	10	m	20	1	10	m
Aug.	26	1	45	a	2	7	7	a	11	7	52	a	18	4	51	a
Sept	24	6	8	a	2	10	35	m	10	0	10	m	17	9	10	m
Oct.	24	11	19	a	2	3	8	m	9	5	17	a	17	2	17	m
Nov.	23	1	22	m	1	8	22	m	8	7	40	m	15	4	26	a
					30	10	11	m								
Dec.	22	4	50	a	30	1	20	m	7	10	55	a	15	7	53	m

In 1740. Six Eclipſes: 1*ſt*, of the ☽ *Jan.* 2, 10 h. 25′ ternoon, viſible, great, 20 Digits: 2*d*, of the ⊙, inviſible, *Jan'* 17. 8 h. 7′: 3*d*. of the ⊙, inviſ. *June* 13, 2h. 20′ Mor 4*th* of ☽, *June* 28, 9h. 23′ inviſ. 5*th* of ⊙, *Dec.* 7, 10 h inviſ. 6*th* of ☽, viſ. 6Digits on the lower ſide, *Dec.* 21, 11h

1741	New ☽				Firſt Qu.				Full ☽				Laſt Qu.			
	d.	h.	′		d	h	′		d	h	′		d	h	′	
Jan'	6	11	25	m	13	8	20	a	21	5	15	m	28	2	12	a
Febr	4	9	54	a	13	6	46	m	20	3	32	a	28	00	24	m
Mar'	6	7	32	m	13	4	25	a	21	1	17	m	28	10	00	m
Apr'	4	4	42	a	12	1	40	m	19	10	30	m	26	7	25	a
May	4	1	24	m	11	10	21	m	18	7	16	a	26	4	12	m
June	2	10	00	m	9	7	00	a	16	3	51	m	24	1	7	a
July	1	8	50	a	9	5	41	m	16	2	44	a	23	11	37	a
	31	9	18	m												
Aug'	30	0	29	m	7	6	15	a	15	3	11	m	22	00	6	a
Sept'	28	6	1	a	6	9	26	m	13	6	19	a	21	3	13	m
Oct'	28	0	31	a	6	3	00	m	12	11	35	a	20	8	28	m
Nov'	27	6	0	m	4	9	30	a	12	6	25	m	19	3	20	a
Dec'	26	10	7	a	5	3	1	m	11	23	41	m	19	9	30	a

In 1641, Two Eclipſes of the ⊙ inviſible; 1*ſt*, *June* 2, 49′ m. 2*d*. is *Nov.* 27, 5 h, 44′ M. The reaſon that the firſt theſe is not ſeen in *Great Britain*, is becauſe the ☽ has 49′ South Latitude, which is augmented by her Parallax.

742	First Qu.			Full ☽			Laſt Qu.			New ☽		
	d	h	′	d	h	′	d	h	′	d	h	′
n′	3	7	7 m	10	04	2 a	18	01	0 m	25	0	21 a
b′	1	11	0 a	9	08	5 a	16	05	0 a	24	0	03 m
ar′	3	8	49 m	10	05	42 m	18	02	34 m	25	8	56 m
r′	1	5	54 a	9	02	46 m	16	11	37 m	23	5	01 a
ay	1	2	08 m	8	11	11 m	15	01	18 a	23	2	21 m
	30	9	40 m									
ne	28	5	31 a	6	06	31 a	14	01	24 m	21	8	44 m
ly	28	2	26 m	6	02	30 m	13	10	27 m	20	6	9 m
g′	26	1	28 a	4	11	24 m	11	08	20 a	19	7	52 a
pt′	25	3	20 m	2	10	20 a	10	07	18 m	17	1	0 a
t′	24	8	00 a	2	0	15 a	9	09	10 a	17	11	00 m
ov′	23	3	17 a	1	5	0 m	8	02	1 a	16	6	17 m
ec′	23	10	34 m	1	0	15 m	8	09	12 m	16	1	36 m
				30	7	30 a						

n 1742, Four Eclipſes, all inviſible: the firſt *May* 8, 11 h. Morn. of ☽: 2*d*, *May* 23, 0 h. 92′ ⊙ Morn, 3*d*, *Nov.* 1, 30′ Aft. 4*th*, *Nov.* 16, 6 h. 15′ Morn. The ☽'s Lat. in the firſt is North, in the two laſt, South.

743	Full ☾			Laſt Qu.			New ☽			First Qu.		
	d	h	′	d	h	′	d	h	′	d	h	′
n.	29	1	17 a	7	04	26 a	14	07	36 m	22	04	31 m
eb.	28	5	10 m	5	10	12 a	13	11	16 a	20	08	18 a
ar.	29	5	32 a	7	02	15 a	15	01	18 a	22	08	39 m
pr.	28	3	50 m	6	02	31 m	13	07	00 m	20	06	50 a
ay	27	3	19 a	5	00	50 a	12	09	47 a	20	06	44 m
ne	25	7	00 a	4	00	20 m	11	01	01 m	18	10	01 m
ly	25	1	51 m	3	04	11 m	10	08	00 m	17	04	55 a
g.	23	10	00 m	1	10	45 m	8	04	06 a	16	01	06 a
				30	07	04 a						
pt.	21	7	20 a	29	04	14 m	7	01	29 m	14	10	26 m
t.	21	8	08 m	28	05	02 a	6	02	19 a	13	11	14 a
ov.	20	0	20 m	27	09	15 m	5	06	26 m	12	03	25 a
c.	19	6	42 a	27	03	35 m	5	01	00 m	12	09	50 m

n 1643, Six Eclipſes: *1ſt*, *Apr.* 13, 9 h. 47′ Morn. ⊙ inviſ. *Apr.* 27, 3 h. 21′ Aft. ☽ inviſ. 3*d*, *May* 12, 5 h. 54′ Aft. , inviſ. 4*th*, *Oct.* 6, 2 m. 43′ Aft. 5*th*, *Oct.* 22, 3 h. 35′ m. ☽, viſible and total, Digits 21 ½ 6*th*, *Nov.* 5, 6 h. 23′ in Morning, ⊙, inviſible.

1744	New ☽			Firſt Qu.			Full ☽			Laſt Qu.		
	d	h	′	d	h	′	d	h	′	d	h	′
Jan.	3	8	23 a	11	05	20 m	18	2	20 a	25	11	14 a
Feb.	2	3	07 a	10	00	4 m	17	9	08 m	24	06	00 a
Mar.	3	7	51 m	10	04	51 a	18	1	50 m	25	10	42 m
Apr.	1	10	06 a	09	07	4 m	16	4	00 a	24	01	01 m
May	1 30	9 5	14 m 55 a	08	06	12 a	16	3	10 m	23	00	06 a
June	29	2	08 m	07	02	51 m	14	11	48 m	21	08	46 a
July	28	7	55 m	06	10	8 m	13	7	04 a	21	04	00 m
Aug.	26	3	24 a	04	04	50 a	12	1	40 m	19	10	31 m
Sept.	25	0	55 m	03	00	22 m	10	9	20 m	17	06	14 a
Oct.	24	0	37 a	02 31	09 09	54 m 36 a	9	6	47 a	17	03	40 m
Nov.	23	3	18 m	30	00	18 a	8	6	30 m	15	03	24 a
Dec.	22	8	16 a	30	05	10 m	7	9	16 a	13	06	07 m

In 1744, Four Eclipſes: *1ſt, Apr.* 1, 9 h. 51′ ⊙, A, inviſ. *2d, Apr.* 15, 8 h. 32′ A. ☽, viſ, Digits 8, on the upper ſide: *3d, Sept.* 25, 1 h. 18′, *M.* ⊙ inviſible: *4th, Oct.* 10, 0 h. 48′, A. ☽ inviſible.

1745	Full ☽			Laſt Qu.			New ☽			Firſt Qu.		
	d	h	′	d	h	′	d	h	′	d	h	′
Jan.	6	02	10 a	13	11	04 a	21	2	35 a	28	11	31 a
Feb.	5	08	27 m	12	5	24 a	20	9	32 m	27	06	27 a
Mar.	7	03	21 m	14	0	15 a	22	2	52 m	29	11	45 m
Apr.	5	08	33 a	13	5	21 m	20	6	10 a	28	03	08 m
May	5	00	04 a	12	9	00 a	20	6	40 m	27	03	36 a
June	4	00	30 m	11	9	27 m	18	4	21 a	26	01	20 m
July	3	10	19 m	10	7	15 a	18	0	33 m	25	09	22 m
Aug.	1 31	06 02	20 a 06 m	09	3	07 m	16	8	23 m	13	05	11 a
Sept.	29	10	30 m	07	11	04 m	14	4	31 a	22	01	30 m
Oct.	28	07	41 a	06	7	28 a	14	1	52 m	21	10	49 m
Nov.	27	06	85 m	05	4	30 m	12	0	45 a	19	09	40 a
Dec.	26	07	22 a	04	3	10 a	12	1	37 m	19	10	31 m

In 1745, Two Eclipſes, both of ⊙, inviſible; *1ſt, March* 22, 2 h. 52,′ morn. *2d, Sept.* 14, 5 h. 2′ aft. The ☽'s Latitude is North in both, *viz.* in the firſt, 2′ 10″; in the other 30″.

1746	Laſt Quar.			New ☽			Firſt Quar.			Full ☽		
	d	h	′	d	h	′	d.	h.	′	d	h	′
Jan.	3	04	22 m	10	04	51 a	18	01	50 m	25	10	46 m
Feb.	1	07	40 a	9	09	40 m	16	06	36 a	24	03	30 m
Mar.	3	00	21 a	11	03	24 m	18	00	20 a	25	09	14 a
Apr.	2	06	10 m	9	10	35 a	27	05	32 m	24	02	27 a
May	1	11	22 a	9	00	07 a	16	09	07 a	24	06	02 m
	31	03	00 a									
une	30	04	21 m	8	01	23 m	15	10	30 m	22	07	25 a
uly	29	04	07 a	7	01	18 a	14	10	17 a	22	07	14 m
Aug.	28	02	26 m	5	11	29 a	13	08	28 m	20	05	28 a
Sept	26	11	20 m	4	08	40 m	11	05	39 a	19	02	31 m
Oct.	25	09	0 a	3	04	14 a	11	03	12 m	18	00	00 a
Nov.	24	06	5 m	2	03	45 m	9	00	40 a	16	09	28 a
Dec.	23	05	0 a	1	02	04 a	8	11	01 a	16	08	01 m
				31	01	45 m						

In 1746, Four Eclipſes: 1*ſt*, *Feb*. 24, 3 h 04′ aft. ☽ viſible 9 Digits on the lower ſide: 2*d*, *March* 11, 2 h. 54′, ☉, morn, inviſible: 3*d*, *Auguſt* 20, 0 h. 5′ morn, ☽, viſible, 6 Digits on the upper ſide: 4*th*, *Sept*. 4. 9 h. 22′ ☉, inviſible.

1747	Firſt Quar.			Full Moon.			Laſt Quar			New Moon		
	d	h	′	d	h	′	d.	h		d	h	′
Jan.	7	10	42 m	14	07	38 a	22	04	35 m	29	3	05 a
Feb.	6	0	31 m	13	09	0 m	20	06	00 a	28	5	53 m
Mar	7	2	50 a	14	11	41 a	22	08	36 m	29	9	24 a
Apr.	6	4	23 m	13	01	22 a	20	10	17 a	28	0	58 a
May	5	2	16 a	13	06	52 m	20	03	48 a	28	4	16 m
June	4	1	14 a	11	10	10 a	19	07	05 m	26	6	47 a
July	4	3	43 m	11	00	57 a	18	09	25 a	26	8	34 m
Aug.	2	5	31 a	10	02	26 m	17	11	21 m	24	9	21 a
Sept.	3	6	20 m	10	03	15 a	18	00	00 m	23	8	51 m
Oct.	1	5	46 a	08	02	43 m	15	11	40 m	22	7	31 a
	30	4	25 m									
Nov.	28	2	50 a	06	01	20 a	13	10	14 a	21	5	53 m
Dec.	28	1	21 m	05	11	44 a	13	08	36 m	20	4	21 a

In 1747, Six Eclipſes: Firſt, *Jan*. 29, 2 h. 52′ aft. ☉, inviſ. d, *Feb*. 14. 5 h. 2′ morn. ☽, viſible and total, 20 Digits. 3*d*, b. 28, 5 h. 18′ morn, ☉, inviſ. 4*th*, *July* 26, 8 h. 50′ morn, n, inviſ. 4*th*, *Aug*. 9, 8 h. 52′ morn, ☽ inviſ. 6*th*, *Aug*. 24, . 28′ aft. ☉, inviſible, by reaſon of the Moon's great South titude 1° 25′ 52″.

1748	Full ☽			Laſt Quar.			New ☽			Firſt Quar		
	d	h	′	d	h	′	d	h	′	d	h	′
Jan.	4	10	22 m	11	7	13 a	19	03	22 m	26	00	20 a
Feb.	2	9	13 a	10	6	16 m	17	02	55 a	24	11	51 a
Mar	3	8	45 m	10	5	35 a	18	02	59 m	25	11	57 m
Apr.	1	8	51 a	9	5	41 m	16	03	56 a	24	10	53 m
May	1	9	46 m	8	6	32 a	16	05	29 m	23	02	25 a
	30	11	20 a									
June	30	1	29 a	7	8	14 m	14	07	54 a	23	04	29 m
July	29	4	52 m	7	10	28 a	14	10	19 m	21	07	54 a
Aug.	27	8	34 a	5	1	51 a	13	02	44 m	20	11	40 m
Sep.	26	11	22 m	4	5	44 m	11	05	27 a	19	02	25
Oct.	26	1	17 m	3	8	18 a	11	07	22 m	18	04	17 a
Nov	24	2	2 a	2	10	6 m	09	08	03 a	17	05	00 m
Dec.	24	2	11 m	1	11	3 a	09	08	09 m	16	05	03 a
				31	11	0 m						

In 1748, Four Eclipſes: *1ſt, Jan.* 19, 3 h. 25′ m. ⊙, inviſ. *2d, Feb.* 3, 11 h. 49′ m. ☽, inviſ. *3d, July* 14, 10 h. 30′ m. ⊙, viſible 10 Digits: *4th, July* 28, 11 h. 33′, a ☽, viſible 5 Digits on the lower ſide; the ⊙'s Obſcurity is on the upper ſide.

1749	New Moon			Firſt Quar.			Full Moon			Laſt Quar.		
	d	h	′	d	h	′	d	h	′	d	h	′
Jan.	7	07	13 a	15	4	13 m	22	01	08 a	29	10	05 a
Febr	6	05	37 m	13	2	35 a	20	11	30 a	28	8	28 m
Mar.	7	03	32 a	15	0	27 m	22	09	22 m	29	6	15 a
Apr.	6	01	14 m	13	10	12 m	20	07	05 a	28	4	04 m
May	5	11	29 m	12	8	28 a	20	05	25 m	27	2	16 a
June	3	11	25 a	11	8	23 m	11	05	20 a	26	2	18 m
July	3	00	42 a	10	9	40 a	18	06	32 m	25	3	29 a
Aug.	2	03	38 m	9	0	35 a	16	09	30 a	24	6	22 m
	31	07	41 a									
Sept	30	0a	04 a	8	4	31 m	15	01	20 a	22	10	18 a
Oct.	30	04	17 m	7	9	5 a	15	06	02 m	22	3	00
Nov	28	07	56 a	6	1	14 a	13	10	10 a	21	7	04 m
Dec.	28	09	41 m	6	4	54 m	13	01	50 a	20	10	45 a

In 1749, Five Eclipſes: *1ſt, Jan.* 7, 7 h. 17′ a. ⊙, inviſible; *2d, June* 29, 9 h. 34′, m. ☽, inviſible; *3d, July* 3, 0 h. 3′ a, of ⊙, inviſ. *4th, Dec.* 12, 8 h. 8′ a. ☽ viſible 5 Digits on the lower ſide; *5th, Dec.* 28, 9 h. 12′ m. ⊙, viſible, 7 Digits on the lower ſide.

1750	First Qu.			Full ☽			Laſt Qu.			New ☽		
	d.	h	′	d.	h.	′	d.	h.	′	d.	h.	′
Jan.	4	6	40a.	12	3	38m	19	0	30a	26	9	38a
Feb.	3	6	36m.	10	3	27a	18	0	20m	25	7	43m
Mar.	4	4	39a.	12	1	37m	20	10	32m	26	4	20a
Apr.	3	1	20m.	10	10	15m	17	7	15a	25	0	37m
May	2	9	35m.	9	6	30a	17	3	26m	24	9	13m
	31	6	10a.									
June	30	4	1m.	8	3	12m	15	0	10a	22	7	1a
July	30	3	45a.	7	1	0a	14	10	4a	22	6	48m
Aug.	28	5	34m	7	0	41m	14	9	36m	20	8	36a
Sept	26	9	18a.	4	2	33a	11	11	30a	19	0	20a
Oct.	26	3	5a	4	6	15m	11	3	11a	19	6	5m
Nov	25	7	30a.	3	0	6a	10	9	9m	18	2	33m
Dec.	25	3	13m.	3	4	30m	10	1	27a	17	6	14a

In 1750, Five Eclipſes, *1ſt*, Of the ☽ viſ. *June* 8, 9h. 9′a. 16 Digits, Total: *2d*, of the ☉, *June* 22, 6 h. 51′ a. inviſ. d, of the ☉, *Nov.* 18, 1 h. 19′ inviſ. *4th*, of the ☽, *Dec.* 2, 6h. 32′ m. Total and Viſible: *5th*, of the ☉, *Dec.* 17, 6 h 54′, a invisible.

1751	Full ☽			Laſt Qu.			New ☽			Firſt Qu.		
	d.	h.	′	d.	h.	′	d.	h.	′	d.	h.	′
Jan.	2	0	13a	8	9	10a	16	10	00m	23	7	0a
	31	4	00m									
Feb.				7	1	05a	14	10	35a	22	7	32m
Mar.	1	4	29a	8	1	24m	16	8	49m	23	5	46a
	31	2	42m									
Apr.	29	11	30m	7	11	39m	14	5	33a	22	2	31m
May	28	6	44a	6	8	28a	14	0	49m	21	9	47m
June	27	2	47m	5	3	40m	12	8	50m	19	5	50a
July	26	10	30m	4	11	42m	11	4	32a	19	1	31m
Aug.	24	8	20a	2	7	26a	10	2	26m	17	11	22m
Sept.	23	8	37m	1	5	15m	8	2	42a	15	11	40a
				30	5	28a						
Oct.	23	0	14m	30	9	09m	8	6	11m	15	3	10a
Nov	21	6	08a	29	3	07m	7	0	17m	14	9	16m
Dec.	21	1	48a	28	10	47a	6	7	52a	14	11	50m

In 1751, Four Eclipſes: *1ſt*, ☉, *May* 14, 0 h. 51′, m. inviſ. d, ☽, *May* 29, 1 h. 57′, m. viſible, 10 dig. on the lower ſide; 3d, ☉, *Nov.* 7, 0 h. 43′ m. inviſ. *4th*, of the ☽, *Nov.* 21, 9h. 47′ a. viſible, 8 digits on the upper ſide.

1752	New ☽			Firſt Qu.			Full ☽			Laſt Qu.		
	d	h	′	d	h	′	d	h	′	d	h	′
Jan.	5	2	26 a	12	11	26 a	20	8	24 m	27	05	20 a
Feb.	4	7	49 m	11	04	49 a	19	1	45 m	27	10	40 m
Mar.	4	10	13 a	12	07	13 m	19	4	12 a	27	01	10 m
Apr.	3	8	54 m	10	05	53 a	18	2	50 m	25	11	48 m
May	2	5	43 a	10	02	41 m	17	11	40 m	24	08	37 a
June	1	1	24 m	08	10	20 m	15	7	12 a	23	04	15 m
	30	8	09 m									
July	29	3	21 a	07	05	09 a	12	2	06 m	21	11	10 m
Aug.	28	0	04 m	06	00	20 m	13	9	19 m	20	06	15 m
Sept.	26	11	19 m	04	09	14 m	11	6	12 a	19	03	10 a
Oct.	26	2	01 m	03	08	19 a	11	5	05 m	18	01	02 m
Nov.	24	7	33 a	02	11	01 m	9	8	07 a	17	05	04 m
Dec.	24	2	33 a	02	04	30 m	9	1	25 a	16	10	22 a
				31	11	32 a						

In 1752, Two Eclipſes, both of the Sun, and inviſible: The *1ſt, May* 2, 5 h. 45′ a. *2d, Oct.* 26, 1 h. 54′, m.

1743	Full ☽			Laſt Quar.			New ☽			Firſt Qu.		
	d	h	′	d	h	′	d	h	′	d	h	′
Jan	8	08	31 m	15	05	40 a	23	9	56 m	30	06	50 a
Feb.	7	03	48 m	14	00	45 a	22	3	53 m	29	00	31 a
Mar.	8	09	53 a	16	66	40 m	23	7	06 a	1	00	53 a
										31	04	06 m
Apr.	7	01	04 a	14	10	06 a	22	7	48 m	29	04	45 a
May	7	01	43 m	14	10	35 m	21	5	26 a	29	02	25 m
June	5	11	24 m	12	08	20 a	20	1	27 m	27	10	21 m
July	4	07	17 a	12	04	15 m	19	8	17 m	26	05	13 a
Aug.	3	02	10 m	10	11	00 m	17	3	20 a	25	00	20 m
Sept.	2	09	13 m	09	06	06 a	15	10	54 a	23	07	18 m
	30	04	12 a									
Oct.	30	04	29 m	08	01	01 m	15	10	30 m	22	07	30 a
Nov.	29	03	42 m	06	01	22 a	14	9	45 m	21	06	44 a
Dec.	28	09	37 m	06	00	40 a	13	3	41 a	21	00	41 m

In 1753, Four Eclipſes *1ſt, Apr. 6*, 8 h. 20′ a, ☽, part viſible, 5 Digits; *2d, Apr*, 22, 7 h, 37′ m. ☉, inviſ. *3d, Oct.* 1, 9 h. 36′ m. ☽, inviſ. *4th, Oct.* 15, 9 h. 59′ m. ☉, viſible, 8 Digits on the lower ſide.

1754	Laſt Qu.			New ☽			Firſt Qu.			Full ☽		
	d.	h.	′	d.	h.	′	d.	h.	′	d.	h.	′
Jan.	4	6	30 a	12	9	22 m	19	6	22 a	27	03	22 m
Feb.	3	0	21 a	10	11	58 a	18	8	56 m	25	05	50 a
Mar.	5	2	45 m	12	10	06 a	20	7	06 m	27	04	04 a
Apr.	4	1	00 m	11	2	30 a	18	11	30 a	26	08	26 m
May	3	5	22 a	11	4	15 m	18	1	13 a	25	10	10 a
June	2	7	07 m	9	3	24 a	17	0	24 m	24	09	20 m
July	1	6	16 a	9	0	09 m	16	9	01 m	23	06	05 a
	31	3	04 m									
Aug.	29	11	13 m	7	8	20 m	14	5	19 a	22	01	15 m
Sept.	27	7	10 a	5	4	16 a	13	1	14 m	20	10	11 m
Oct.	27	4	03 m	5	1	11 m	12	10	10 m	19	07	07 a
Nov.	25	2	10 a	3	11	20 m	10	8	19 a	18	05	16 m
Dec.	25	2	02 m	2	11	15 a	10	8	13 m	17	05	07 a

In 1754, Six Eclipſes: *1ſt, Mar.* 12, 5 h. 52′ a. ⊙, inviſ. 2*d, Mar.* 27, 4 h. 10′ m. ☽, inviſ. 3*d, Mar.* 11, 10 h. 17′ m. Sun, inviſ. 4*th, Sept.* 5, 1 h. 13′ a. ⊙, inviſ. 5*th, Sept.* 20, 5 h. 6′ m. ☽, inviſ. *6th, Oct.* 3, 1 h. 31′ a. ⊙, inviſ.

1755	New ☽			Firſt Qu.			Full ☽			Laſt Qu.		
	d.	h.	′	d.	h	′	d.	h.	′	d.	h.	′
Jan.	1	0	43 a.	8	9	42 a.	16	6	37 m.	23	3	30 a.
	31	5	06 m.									
Feb.				7	2	5 a.	14	11	00 a.	22	8	01 m.
Mar.	1	10	20 a.	9	7	19 m.	16	4	15 m.	24	1	10 m.
	31	3	44 a.									
Apr.	30	8	03 m.	8	0	40 m.	15	9	36 m.	22	6	21 a.
May	29	10	22 a.	7	5	3 a.	15	2	00 a.	22	11	01 m.
June	28	10	58 m.	6	5	21 m.	13	2	17 m.	20	11	10 a.
July	27	10	10 a.	5	7	58 a.	13	4	50 a.	20	1	44 a.
Aug.	26	8	04 m.	4	7	10 m.	11	4	05 m.	19	1	02 m.
Sept.	24	5	40 a.	2	5	4 a.	10	2	01 a.	17	11	00 m.
Oct.	24	3	13 m.	2	2	40 m.	9	11	35 m.	16	8	31 a.
Nov.	22	1	03 a.				8	9	09 a.	16	6	05 m.
				29	10	3 a.						
Dec.	22	0	04 m.	29	9	4 m.	7	7	05 m.	14	6	05 a.

In 1755, Four Eclipſes: *1ſt, Mar.* 1, 9 h. 45′ a. ⊙, inviſ. 2*d, Mar.* 17, 0 h. 12′ m. ☽, viſible, 7 Digits: 3*d, Aug.* 26, 8 h. 30′ ⊙, inviſ. 4*th, Sept.* 9, 10 h. 40′ ☽, inviſible.

1756	Full ☽			Laſt Qu.			New ☽			Firſt Qu.		
	d	h.	′	d.	h.	′	d.	h.	′	d.	h.	′
Jan.	5	6	02 a	13	3	04 m	20	0	24 a	27	9	24 a
Feb.	4	6	20 m	11	3	15 a	19	2	22 m	26	11	22 m
Mar.	4	8	22 a	12	5	19 m	19	5	17 a	27	2	13 m
Apr.	3	11	10 m	10	8	05 a	18	8	41 m	25	5	37 m
May	3	2	32 m	10	11	32 m	17	11	54 a	23	8	51 m
June	1	5	47 a	9	2	41 m	16	2	37 a	23	11	31 a
July	1	8	30 m	8	5	20 a	16	5	03 m	23	2	3 a
	30	11	02 a									
Aug.	29	0	15 a	7	8	00 m	14	6	36 a	22	3	25 m
Sept	28	1	07 m	5	9	12 a	13	7	9 m	20	4	9 a
Oct.	27	0	13 a	5	10	06 m	12	7	19 a	20	3	18 m
Nov.	25	11	04 a	3	9	01 a	11	5	06 m	18	2	5 a
Dec.	25	9	27 m	3	8	05 m	10	3	32 a	18	0	30 m

In 1756. Two Eclipſes of the Sun, and both inviſible: 1ſt, *Feb.* 19, 1 h. 48′ m. 2*d*, *Aug.* 14, 7 h. 12′ a.

1757	Laſt Qu.			New ☽			Firſt Qu.			Full ☽		
	d	h.	′	d	h	′	d	h	′	d	h	′
Jan'	1	6	27 a	9	0	0 m	16	9	00 a	24	6	02 m
	31	3	3 a									
Febr				7	1	3 a	14	10	03 a	22	7	07 m
Mar'	1	4	2 a	9	0	34 m	16	9	14 m	23	6	13 a
	31	3	10 m									
Apr'	29	3	5 a	7	0	28 a	14	9	26 a	22	6	24 m
May	29	4	30 m	7	1	42 m	14	10	40 m	21	7	36 a
June	28	0	0 m	5	4	04 a	13	6	02 m	20	3	01 a
July	27	9	32 m	5	6	40 m	12	3	38 a	20	0	35 m
Aug'	26	1	27 m	3	10	25 a	11	7	42 m	18	4	32 a
Sept'	24	4	33 a	2	1	47 a	09	10	45 a	17	7	37 m
Oct'	24	7	41 m	2	4	48 m	09	1	47 a	16	10	46 a
				31	6	00 a						
Nov'	22	9	1 a	30	8	04 m	08	7	01 m	15	0	02 a
Dec'	22	10	0 m	29	6	11 a	07	5	04 a	15	2	02 m

In 1757, Five Eclipſes: 1*ſt*, *Jan.* 24, 7 h. 6′ m, ☽ part viſ. 7 Digits on the upper ſide: 2*d*, *Feb.* 7, 1 h. 2′ a. ⊙, inviſ. 3*d*, *July* 19, 11 h. 53′ a. ☽, viſ. 11½ Digits: 4*th*, *Aug.* 3, 10 h. 45′ a. ⊙, inviſ. 5*th*, *Dec.* 29, 6 h. 11′ a. ⊙, inviſible.

1758	First Qu.			Full ☽			Laſt Qu.			New ☽		
	d	h	′	d	h	′	d	h	′	d	h	′
Jan.	6	3	11 m	13	0	10 a	20	9	04 a	28	4	36 m
Feb.	4	1	35 a	11	10	30 a	19	7	25 m	26	0	30 a
Mar.	5	9	21 a	13	6	17 m	20	3	12 a	27	11	00 a
Apr.	4	8	00 m	11	5	05 a	19	2	04 m	26	11	40 m
May	3	8	40 a	11	5	33 m	18	2	27 a	25	11	02 a
June	2	8	02 m	09	5	01 a	17	2	00 m	24	8	55 m
July	1	5	54 a	09	2	50 a	16	11	46 m	23	11	03 a
	31	8	03 m									
Aug.	29	9	46 a	07	5	02 a	15	2	01 m	22	4	49 a
Sept.	28	5	06 m	06	6	42 m	13	3	38 a	21	8	06 m
Oct.	28	10	20 m	05	2	05 m	13	11	04 m	21	1	20 m
Nov.	27	1	50 m	04	7	19 a	12	4	14 m	19	4	30 a
Dec.	26	4	29 a	04	11	47 m	11	7	41 a	19	7	29 m

In 1758, Five Eclipſes: *1ſt, Jan.* 13, 6 h. 13′ m. ☽, part viſible and total, Digits 21: *2d, Jan.* 28, 4 h. 36′ m. ⊙, inviſ. *3d, June* 24, 8 h. 55 ⊙, inviſ. *4th, July* 9, 4 h. 44′ a. ☽, inv. *5th, Dec.* 19, 7 h, 29′ m. ⊙, inviſible.

1759	Full ☽			Laſt Qu.			New ☽			First Qu.		
	d	h	′	d	h	′	d	h	′	d	h	′
Jan.	03	01	28 m	10	10	20 m	17	7	58 a	25	4	56 m
Feb.	01	01	51 a	08	10	47 a	16	5	05 m	23	2	05 a
Mar	02	11	04 a	10	08	03 m	17	6	44 a	25	3	40 m
Apr.	01	00	40 a	08	09	37 a	15	10	03 a	23	7	32 m
	30	04	31 a									
May	30	02	24 m	08	01	26 m	15	8	38 m	22	5	36 a
June	28	11	25 m	06	11	21 m	13	5	28 a	21	2	28 m
July	27	08	48 a	05	08	20 a	13	2	54 m	20	11	51 m
Aug.	26	10	36 m	04	05	46 m	11	4	40 a	19	1	39 m
Sept.	25	00	50 m	02	07	33 a	10	6	56 m	17	3	33 a
Oct.	24	04	41 a	02	09	45 m	09	10	52 a	17	7	50 m
Nov.	23	11	32 m	01	01	34 m	08	5	50 a	16	2	41 m
				30	08	27 a						
Dec.	23	08	10 m	30	05	08 a	08	2	12 a	15	11	12 a

In 1759. Three Eclipſes: *1ſt, Jan* 2, 7 h. 46′ m. ☽. Part viſible 7 Digits on the lower ſide: *2d, June* 13, 5h 23′ a. Sun inviſ. by reaſon of the ☽'s South Latitude 39′: *3d, Dec.* 8, 2 h. 14′ Sun, inviſible.

1760	New ☽			Firſt Qu.			Full ☽			Laſt Qu.		
	d	h	′	d	h	′	d	h	′	d	h	′
Jan'	07	6	24m	14	3	24a	22	00	20m	29	9	15m
Feb'	05	8	36a	13	5	32m	20	02	27a	27	11	18a
Mar'	06	7	38m	13	4	35a	21	01	30m	28	10	28m
Apr'	04	5	34a	12	2	33m	19	11	26m	26	8	22a
May	04	0	53m	11	9	51m	18	06	47a	26	3	41m
June	02	7	19m	9	4	19a	17	01	14m	24	10	10m
July	01	4	00a	9	1	00m	16	10	00m	23	7	00a
	31	1	14m									
Aug'	29	0	12a	7	10	11m	14	07	10a	22	4	09m
Sept'	28	2	52m	5	9	12a	13	06	04m	20	3	04a
Oct'	27	7	02a	4	11	50a	12	08	46m	19	5	40a
Nov'	26	2	02a	4	4	02m	11	01	00a	18	10	01a
Dec'	26	7	36m	3	11	00a	11	08	01m	18	5	00a

In 1760, Four Eclipſes: *1ſt, May* 18, 9 h, 35′ a. ☽, viſible 1 Digit: *2d, June* 2, 7 h. 22 m. ☉, viſible 5 Digits on the lower ſide: *3d, Nov.* 11, 9 h 11′ a. ☽, viſible 6½ Digits on the upper ſide: *4th, Nov.* 26, 2 h. 2′ a. ☉, inviſible.

1761	Firſt Qu.			Full ☽			Laſt Qu.			New ☽		
	d	h	′	d	h	′	d	h	′	d	h	′
Jan.	02	4	36a	10	1	25m	17	10	21m	25	03	52m
Feb.	01	0	51a	08	9	43a	16	06	38m	23	07	08a
Mar.	03	4	08m	10	1	07a	17	10	04a	25	08	12m
Apr.	01	5	12a	09	2	10m	16	11	08m	23	05	40a
May	01	2	36m	08	11	31m	15	08	27a	23	01	24m
	30	10	22m									
June	28	5	33a	06	7	21a	14	04	18m	21	08	37m
July	28	0	46m	06	2	31m	13	11	29m	20	03	46a
Aug.	26	7	50m	04	9	44m	11	06	41a	18	10	50a
Sept.	24	6	32a	02	4	40a	09	11	34a	17	09	40m
Oct.	24	7	28m	02	3	30m	09	00	27a	16	10	29a
				31	4	26a						
Nov.	22	11	15a	30	8	10m	08	01	24m	15	02	15a
Dec	23	6	02m	30	3	00a	07	05	05a	15	09	02m

In 1761, Six Eclipſes: *1ſt, Apr* 23, 5 h. 40′ m. ☉, inviſ. ***2d, May*** 7, 10 h. 2′ a. ☽, viſible, total: *3d, May* 23, 1 h. 24′ m. ☉, inviſ. *4th, Oct.* 16, 10 h. 39′ a. ☉, inviſ. *5th, Nov.* 1, 11 h. 43′ m. ☽, inviſ. *6th, Nov.* 15, 2 h. 15′, a. ☉, inviſ. Moon's Lat. 1° 16′ S.

1762	Laſt Qu.			New ☽			Firſt Qu.			Full ☽		
	d	h	′	d	h	′	d	h	′	d	h	′
Jan.	7	00	90 m	14	4	54 m	21	1	53 a	28	10	49 a
Feb.	5	07	40 m	12	10	00 a	20	7	38 m	27	4	00 a
Mar.	7	01	02 m	14	3	20 a	22	0	19 m	29	9	15 m
Apr.	5	06	12 a	13	5	28 m	20	2	27 a	27	11	24 a
May	5	08	20 m	12	4	23 a	21	1	21 m	28	10	19 m
June	4	07	14 a	11	0	19 m	18	9	17 m	25	6	14 a
July	3	03	12 m	10	8	26 m	17	5	20 a	25	2	18 m
Aug.	1	11	10 m	08	4	0 a	16	1	00 m	23	10	00 m
	30	07	01 a									
Sept.	29	00	27 a	07	9	34 m	14	6	32 a	22	3	30 m
Oct.	28	00	13 a	06	9	25 m	13	6	24 a	21	3	19 m
Nov.	26	11	05 a	04	8	6 a	13	5	05 m	19	2	04 a
Dec.	26	02	20 a	04	11	30 m	11	5	30 a	19	5	26 m

In 1758, Four Eclipſes: *1ſt. Apr.* 13, 5 h. 28′ m. ☉, inviſ. 2d, *Apr.* 27. 3 h. 36′ m. ☽, viſible 10 Digits on the upper ſide: 3*d*, *Oct.* 6, 8 h. 12′ m. ☉, viſible 6 Digits on the upper ſide: 4*th*, *Oct.* 21, 9 h. 11′ a. ☽, viſible 7 Digits on the lower ſide.

1763	New ☽			Firſt Qu.			Full ☽			Laſt Qu.		
	d	h	′	d	h	′	d	h	′	d	h	′
Jan.	03	04	40 m	10	01	40 a	17	10	34 a	25	7	30 m
Feb.	01	09	38 a	09	06	32 m	16	3	27 a	24	0	25 m
Mar	03	04	36 a	11	01	31 m	18	10	21 m	25	7	10 a
Apr	02	10	16 m	09	07	15 a	17	4	12 m	24	1	11 a
May	02	00	10 m	09	09	09 m	16	6	07 a	24	3	03 m
	31	01	30 a									
June	29	11	36 a	07	10	27 a	15	7	24 m	22	4	20 a
July	29	08	14 m	07	08	35 m	14	5	32 a	22	3	31 m
Aug.	27	04	24 a	05	05	13 a	13	2	10 m	20	11	08 m
Sept.	26	01	15 m	04	01	24 m	11	10	23 m	18	7	19 a
Oct.	25	10	10 m	03	10	21 m	10	7	18 a	18	4	14 m
Nov.	23	09	16 a	01	07	09 a	09	4	07 m	16	1	06 a
Dec.	23	10	10 m	01	06	15 m	08	7	12 a	16	0	10 m
				30	07	07 a						

In 1763, Two Eclipſes, both of the Sun, inviſible: *1ſt, Apr.* 2, 10 h. 5′ m. the other is *Sept.* 26, 1 h. 5′ m. Moon's Lat. is South in the firſt, North in the ſecond.

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The Inviſible Eclipſes made Viſible; Or the Places Where, and the Time When, Calculated; in which all theſe Eclipſes may be ſeen that are Inviſible to any part of Great Britain.

THE Learner muſt obſerve, when he finds the Longitude of any of the following Places to be Eaſt from *London*, the Time of the Eclipſe happens ſo much ſooner there than it does at *London*: If Weſt, ſo much later.

1734. *April* 22, 4′ paſt 10 in the Forenoon, the Sun will be Totally Eclipſed; in *Taurus* 12 deg. ſeen by all *Africa*, in *Brazil* in South *America*: It will be then Vertical to the *Ethiophian* Ocean, Latitude 15 degrees North, Longitude 30 degrees Eaſt from *London*; which gives 2 hours in time. This Eclipſe will not be conſpicuous to any part of *Great Britain* or *Ireland*, by reaſon of the Moon's ſmall North Latitude 2′ 45″: It is alſo Central.

October 15, at 20′ paſt 6 at Night the Sun will be Totally Eclipſed in *Scorpio* 3 deg. it will then be Viſible and Vertical to *Mardelzur*, or the great Southern Ocean, Weſt of South *America*; Latitude 13 deg South, Longitude Weſt from *London*, 90 degrees, 6 Hours in Time; therefore I conclude, it will not be 6 o'Clock there, 'till it is Midnight at *Loudon*.

1735, *March* 27, 41′ paſt 10 Morning the Moon is Eclipſed in *Libra* 17 deg 5 digits on the North ſide, Viſible to *Mardelzur*, to the Northern Parts of *America*, to the Eaſtern Parts of *China*, to the *Japan*-Iſles, and the Iſlands adjacent in the Eaſt.

April 11, near Midnight, the Sun is Eclipſed in *Taurus* 2 degrees, and is at that time Vertical near *Weſt Padro* in the great Ocean, between *America* and *China*; 8 Digits on the South ſide Lat. 11 deg. North Longitude from *London* 180 deg. Eaſt or Weſt, it being the half of the Earth's Circumference 12 h. in Time.

October 5, at 40′ paſt 2 Morning, the Sun is Eclipſed in *Libra*, 22 deg. 9 Digits on the North ſide, Viſible and Vertical to the Sea between *Terra-de-Papas* and *New Holland* in 9 deg. South Latitude, and Longitude 140° Eaſt from *London*, which gives 9 h. 20′.

1736, *March* 1, at 3, Afternoon the Sun is Eclipſed in *Piſces*, 22 degrees, 2 Digits on the North ſide; then Vertical to *Brazil* in *America*, Latitude South 3 deg. Longitude Weſt 50°, 3 Hours 20′.

March 31, at 7, in the Morning, the Sun is Eclipſed in *Aries*, 22 degrees. It will be but a very ſmall *Deliquium* on the South ſide of the Sun, Viſible in the Antartic Circle, Vertical to the Southern parts of the *Eaſt Indies* near *Calecut*; Latitude 14 deg. North, Longitude 77 deg. Eaſt, 5 h. 8′. in Time.

Auguſt 25, at 9, in the Morning the Sun will be Eclipſed in *Virgo*, 13 deg. near 3 Digits on the South ſide. The Sun will be then Vertical to *Abyſſinia*, not far from the South Entrance into the Red Sea; but the Eclipſe will only be ſeen in the Lat. 64 deg. South, that is, in the unknown Sea, and Longitude 40 deg. Eaſt, 2 h. 40′.

September

September 23, at 44′. paſt 5, in the Afternoon the Sun is Eclipſed in *Libra*, 11 deg. 1 Digit and a half, ſeen in the Latitude 66 North, Longitude Weſt 95, 6 h. 20′. The Sun is then Vertical to *Mardelzur*.

1737, *March* 5, at 16′. paſt 4, in the Afternoon, the Moon is Eclipſed in *Virgo*, 25°. 6 Digits on the South ſide; ſeen by all *Aſia*, the Eaſtern Parts of *Africa*, and Northern Parts of *Europe*, Vertical to the Southern Parts of *Borneo*, Latitude 5 deg. North Longitude 11° Eaſt, 7 Hours 40′.

Auguſt 15, at 1, in the Morning, the Sun is Eclipſed in *Virgo*, 3°. This will be no where Total; The Sun is Vertical to the Ocean, Eaſt of the *Philippine* Iſlands; and in the Sea between *Van Diemens* Iſles, and *Zealandia Nova*, the Eclipſe will be moſt Conſpicuous.

1738, *February* 7, at 4, in the Afternoon, the Sun is Eclipſed in 29°. *Aquarius*, and is then Vertical to the Country of the Amazons in *South America*. It will be a great Eclipſe in it ſelf; for all the *Penumbra* will fall within the Earth's Disk. It will be very conſpicuous to the *Caribbe* Iſlands and Places adjacent, about the Latitude of 14 degrees North Longitude 60 deg. Weſt, 4 Hours.

1739, *January* 28, at 4, in the Morning, the Sun is Eclipſed in *Aquarius*, 19 deg. 9 Digits. The Sun will be then Vertical a little to the Weſt of *Hollandia Nova*, Latitude 45 deg. South, Longitude 110 deg. Eaſt, 7 h. 20′.

July 9. at 4, the Afternoon, the Moon is Eclipſed in *Capricornus*, 27 degrees; ſhe is Vertical to the Middle of *Hollandia Nova*, Lat. 20° South, Longitude 126 Eaſt, 8 h. 24′. Digits on the South ſide.

1740,

1740, *January* 17, at 8 at Night, the Sun is Eclipſed in *Aquarius* 8 degrees, one Digit on the South ſide, Vertical to *Mardelzur*, Latitude 18 South, Longitude 120 Weſt, 8 Hours.

June 13, at 2 in the Morning, the Sun is Eclipſed in *Cancer*, 3 Degrees, Vertical to the Oriental Sea, Eaſt of *China*, 6 Digits on the South ſide, Latitude 23° North, Longitude 171° 11 h. 16′.

June 28, at 9 in the Forenoon, the Moon is Eclipſed in 17 Degrees of *Capricorn*, 13 Digits, ſeen by almoſt all *America*, Vertical to *Mardelzur*, Latitude 22 Degrees South, Longitude 124 Weſt, 8 Hours, 16 min.

December 7, at 11 at Night, the Sun is Eclipſed in *Sagittary* 27 Degrees, and is then Vertical to the great Southern Ocean, Lat. 23 South, Long. 170 Weſt, 11 h. 40′.

1741, *June* 2, at 10 in the Morning, the Sun is Eclipſed in *Gemini*, 22 Degrees, then Vertical to the Southern Parts of *Egypt*, Latitude 22 North, Longitude 33 Eaſt, 2 h. 12′. This Eclipſe is Total, and will be ſeen by the *Ethiopians*, and the adjacent Places.

November 27, at 6 in the Morning, the Sun is Eclipſed 16 Degrees in *Sagittary*. This will be a very great Eclipſe, Total and Central, ſeen in *China* and all the Eaſtern Countries. The Sun is then Vertical to the great unknown Ocean, Eaſt of *Madagaſcar*, Latitude 23 South, Longitude 80° Eaſt, 5 h. 20′.

1742, *May* 8, near Noon, the Moon is Eclipſed in *Scorpio* 28 Degrees, 4 Digits on the South ſide. She is then Vertical to the great unknown Ocean, South of *Mardelzur*, Latitude 20 Degrees South, Longitude 180 Degr. 12 h.

May 22, at 12 at Night, the Sun will be Totally Eclipſed in *Gemini* 12 Degrees, Viſible to our Antipodes, and to all that unknown Ocean.

November 1, at Noon, the Moon is Eclipſed in *Taurus*, 20 Degrees, 3 Digits on the North ſide, Vertical to the great Ocean between *China* and *America*, where it will be Viſible, and to all the Eaſtern Iſlands beyond *China*, to *California*, and ſome Parts of North *America*.

November 16, at 6 in the Morning, the Sun is Eclipſed in *Sagittary* 5 Degrees, Viſible and Vertical to the Oriental Ocean. This Eclipſe is partial, part of the Penumbra only falling within the Earth's Disk.

1743, *April* 13, at 9 in the Morning, the Sun is Eclipſed in *Taurus* 4 Degrees, 2 Digits, Viſible to the South Sea beyond the *Cape of Good Hope*, Vertical to the Middle of the *Abiſſine* Land, to the Weſt of the Red Sea.

April 27, at 3 in the Afternoon, the Moon is Totally Eclipſed in *Scorpio*, 18 Degrees, Vertical to *Hollandia Nova*, Viſible to *Perſia*, *Eaſt India*, *China*, and the Iſles adjacent, to *Tartary*, &c.

May 12, at 6 at Night, the Sun is Eclipſed in *Gemini*, 2 Degrees, 3 Digits on the North ſide. The Sun then Vertical to the Bay of *Honduras*, Weſt of *Jamaica*, moſtly ſeen in the Northern Parts of *America*.

October 6, near 3 in the Afternoon, the Sun is Eclipſed in *Libra* 24 Degrees, near 2 Digits on the North ſide, then Vertical to *Braſil* in *America*, moſtly ſeen in *North America*.

November 5, at 6 in the Morning, the Sun is Eclipſed in *Scorpio* 23 Degrees, then Vertical to the Oriental Ocean, South Weſt of *Sumatra*; it will be but a very ſmall Eclipſe, and ſeen about the Antartic Circle.

1744, *April* 1, near 10 at Night, the Sun is Eclipſed in 23 Degrees of *Aries*, about 6 Digits on the South ſide, ſeen in the great Ocean Weſt of *America*, the Sun Vertical in Latitude 9, North, Longitude 142 Weſt, 9 h. 28′.

September 25, at 1 in the Morning, the Sun is Eclipſed in 13 Degrees of *Libra*, 7 Digits on the North ſide, Viſible in the Ocean Eaſt of *Tartary*, Vertical to *Mardelzur*, Latitude 5 South, Longitude 142 Eaſt, 9 h. 20′.

October 10, a little paſt Noon, the Moon is Eclipſed 6 Digits on the South ſide in *Aries* 28 Degrees, Vertical to the great Ocean Eaſt of *China*, in 11 Degrees North Latitude, and 173 Degrees Eaſt Longitude, 11 h. 32′. It will be VIſible to part of *Eaſt India*, *China*, *Japan*, *Tartary*, to all the great Ocean between thoſe Places and *America*, where ſome part of the North Weſt of that Continent will ſee it.

1745, *March* 22, near 3 in the Morning, the Sun will ſuffer a great Eclipſe in *Aries*, 12 Degrees, Viſible in *China*, and all the adjacent Places. The Sun is Vertical to the *Philippine* Iſlands, Latitude 5 Degrees North, Longitude 135 Eaſt, 9 h.

September 14, at 5 in the Afternoon, the Sun will be Totally Eclipſed in *Libra* 2 Degrees, 7 Digits on the South ſide. The Sun is then Vertical to the North Parts of *Peru* in *America*, Latitude 0 Degr. 33′, Longitude 76 Weſt, 5 h. 8′; in the Northern Parts of which Country it will be Total.

1746, *February* 24, at 44′ paſt 3 in the Afternoon, the Moon is Eclipſed 9 Digits on the South ſide, in *Virgo* 17 Degr. She is then Vertical to the *Indian* Sea, between *Ceylon* and *Sumatra*, in Latitude 5 Degrees North, Longitude 90 Degr. Eaſt, 6 h. It will be Viſible to all *Aſia*, part of *Africa*, and part of *Europe*, about 6 Degrees Eaſt from *London* ; the Moon will Riſe as the Eclipſe Ends.

March 11, at 5 in the Morning the Sun is Eclipſed 6 Digits in *Aries*, 1 Degree ; it will be moſt Conſpicuous on the Eaſt Borders of *Tartary*.

September 4, at 9 in the Morning the Sun is 5 Digits Eclipſed on the South ſide, in *Virgo* 22 Degrees ; Vertical or directly over the Eaſtern Parts of *Ethiopia*, Latitude 3° North, Longitude 51 Eaſt, 3 h. 24′.

1747, *January* 29, at 3 in the Afternoon the Sun will be Eclipſed in *Aquarius*, 21 Degrees, Vertical to *Brazil*, Latitude 14 Degrees South, Longitude 50 Degrees Weſt, 3 h. 20′.

This will be a very ſmall Eclipſe, Viſible near the Antartic Circle.

February 28, at 5 in the Morning the Sun is 1 Digit Eclipſed on the North ſide, in *Piſces*, 20 Degrees ; he is then Vertical to the *Indian* Sea between *Bornio* and *Java*, Lat. 4 Degrees South, Long. 110 Eaſt, 7 h. 20′. ſeen in *Greenland* and Places adjacent.

July 26, at 50′. paſt 8 in the Morning the Sun is 1 Digit Eclipſed in *Leo* 13 Degrees, Vertical to *Arabia Felix*, Latitude 17 Degrees, Longitude 41 Degrees Eaſt, 3 h. Viſible in the North frozen Sea, Latitude 80 Degrees.

Auguſt 9, at 10 in the Forenoon, the Moon is Totally Eclipſed, thus, 17 Digits, in 27 Degrees *Aquarius* ; ſhe is then Vertical to *Mardelzur*, Latitude 12 Degrees South, Longitude 146 Degrees Weſt, 9 h. 44′. Viſible to the *Japan* and *Philippine* Iſlands, to all the Weſt Ocean between *Aſia* and *America*, as alſo to all the Weſtern Parts of *America* from South to North, including *Jamaica*, *Cuba*, *Carolina* and *Virginia* ; the Horizon of the Viſible Disk paſſeth thro' *Penſilvania*, &c.

Auguſt 24, at 9 at Night the Sun is Ecliped in *Virgo*, 12 Degrees. This is a very ſmall Eclipſe, and only ſeen in the unknown Southern Parts of the World.

1748, *January* 19, at 3 in the Morning the Sun is Eclipſed 5 Digits on the South ſide, in 10 Degrees *Aquarius*, Vertical then to the Eaſtern Parts of *Hollandia Nova*, Latitude 18 Degrees South, 135 Eaſt, 9 h. Viſible only to the unknown Southern Seas.

February 3, near Noon the Moon is Eclipſed in *Leo* 25 Degrees, five Digits on the North ſide; ſhe is Vertical to the great Ocean Eaſt of *Japan*, Latitude 13 Degrees North, Longitude 180 Degrees, 12 h. ſeen in *China*, in part of *Tartary*, and in the North Weſt Parts of *America*.

1749, *January* 7, at 7 at Night, the Sun is Eclipſed, ſcarce one Digit, in *Capricornus* 29 degrees. Seen in the Northern Parts of *America*.

June 19, between 9 and 10 in the Forenoon, the Moon is Eclipſed, but one Quarter of a Digit. It may be ſeen at the Eaſtern Iſlands, and almoſt all *America*.

July 3, at 31′ paſt Noon the Sun is Eclipſed near 10 Digits on the South ſide, in *Cancer*, 22 degrees; Vertical to *Barbary*, Latitude 22 degrees North, Longitude 7 Weſt, 28′.

It will be ſeen by thoſe that Sail to *Eaſt India*, in the Seas about the *Cape of Good Hope*, that is, if the Air be clear, the more Southward they ſail the more digits they will ſee Eclipſed.

1750, *June* 22, at 51′. paſt 6 at Night the Sun is 6 Digits Eclipſed in *Cancer*, 11 Degrees, Vertical to the North Weſt Parts of *New Spain* in *America*. Seen in the Straits of *Magellan*.

November

November 18, at 1 in the Morning the Sun is Eclipſed in *Sagittarius* 7 Degrees. It will be very ſmall, ſcarce worth taking Notice of, Viſible about the Antartic Pole.

December 17, at 7 at Night the Sun is Eclipſed 2 Digits on the North ſide, in 7 Degrees of *Capricornus*, Vertical then to the Pacifick Ocean, Latitude 23 South, Longitude 105 Weſt, 7 h. moſt ſeen in *North America*.

1751, *May* 14, at 1 in the Morning the Sun is Eclipſed 7 Digits on the North ſide, in *Gemini*, 3 Degrees; and is then Vertical to the Oriental Sea, Latitude 21, Longitude 164′. Eaſt, 10 h. 56′. ſeen only about the Artic Circle.

November 7, near 1 in the Morning, the Sun is Eclipſed in *Scorpio*, 25 Degrees; he is then Vertical to the Ocean Eaſt of *New Holland*, Latitude 19 South, Longitude 170 Degrees Eaſt, 11 h. 20′. only Viſible in the unknown Southern Seas.

1752, *May* 2, at 6 at Night the Sun is Eclipſed in *Taurus* 23 Degrees, Vertical to the Bay of *Honduras* in *North America*, where it will be Total; and more Southerly, it will be ſtill greater, to thoſe 87 Degrees Weſt of *London*.

October 26, at 2 in the Morning the Sun is Eclipſed in *Scorpio* 14 deg. Vertical to a little Sea Eaſt of *Terra Carpentaria*, Latitude 16 Degrees South, Longitude 148 Degrees Eaſt, 9 h. 52′, near which Place it will be Total, and very formidable to all thoſe Parts.

1753, *April* 22, at 5 in the Morning the Sun is near 8 Digits Eclipſed on the South ſide, in *Taurus*, 13 Degrees, then Vertical to the *Arabian* Sea, Latitude 16 South, Longitude 62 Degrees Eaſt, Viſible in the Oriental Ocean, to *Madagaſcar*, &c.

October 1, between 9 and 10 in the Forenoon, the Moon will be near 6 Digits Eclipſed on the South ſide in *Aries* 19 Degrees, then Vertical to the great Ocean Weſt of *America*, where it is Viſible, and to almoſt all *America*.

1754, *March* 12, at 6 at Night the Sun is 2 Digits Eclipſed on the North ſide, in *Aries* 3 Degrees, Vertical to a little Sea Weſt of *Terra firma*, Latitude 8 Degrees North, Longitude 90 Degrees Weſt, 6 h. ſeen in North *America*.

March 27, at 4 in the Morning the Moon is Totally Eclipſed, Digits 21, Vertical to the Eaſt Borders of *Peru*, Latitude 6 South, Longitude 70 Weſt, 4 h. 40′. Viſible to all *America*, &c.

April 11, at 10 in the Forenoon the Sun is 2 Digits Eclipſed on the South ſide; in *Taurus* 2 Degrees, Vertical to the Eaſtern Parts of *Nigitria* in *Africa*, Latitude 12 Degrees North, Longitude 30 Eaſt, 2 h. Viſible only to the unknown Southern Seas.

September 5, at 1 in the Afternoon the Sun is Eclipſed in *Virgo*, 23 Degrees. This is leſs than the foregoing Eclipſe, the Sun is Vertical to the Eaſtern Ocean beyond the *Philippine* Iſlands, Latitude 3 Degr. North, 163 Degrees Eaſt 10 h. 52′.

September 20, at 6 in the Morning the Moon is Totally Eclipſed, 21 Digits, in *Aries* 8 Degrees, Viſible to all *America*, Vertical to the Sea Weſt of *Panama* in *America*, Latitude 3 Degrees North, Longitude 90 Degrees Weſt, 6 h.

October 5, at 1 in the Morning the Sun is Eclipſed 2 Digits on the North ſide, in *Libra* 22 Degrees, Vertical to *Mardelzur*, Latitude 8 Degrees South, Longitude 130 Weſt, 18 h. 20′; Viſible in the Artic Circle.

It is Remarkable this Year, that there are ſix Eclipſes and all Inviſible to any Part of *Great Britain* or *Ireland*.

1755, *March*, 1, near 10 at Night the Sun is Eclipſed Digits on the North ſide, in *Piſces* 22 Degrees, then Vertical to *Mardelzur*, but little different from the Place in *October* laſt, Viſible on the Weſt Borders of *America* and unknown Ocean.

Auguſt 26, at 8 in the Morning the Sun in Eclipſed Digits on the South ſide, in *Virgo* 13 Degrees, Vertical to the *Indian* Sea, Latitude 6° North, Longitude 60 Degrees Eaſt, 4 h. Viſible to the Southern Seas.

September 9, near 11 in the Forenoon the Moon is Eclipſed 8 Digits on the North ſide, in *Piſces* 17°, then Vertical to *Mardelzur*, Latitude 1° South, Longitude 160° Weſt, 10 h. 4′ Viſible to all the Northern parts of *America* and *Aſia*, to Part of *Tartary*, *China*, and thoſe Eaſtern Parts.

1756, *February* 19, at 2 in the Morning the Sun is Eclipſed in *Piſces* 11 Degrees, and is then Vertical to *Terra de Papas*, Latitude 7° South, Longitude 146 Eaſt 9 h. 44′. This will be a very great Eclipſe, Total and Central at *Borneo*.

Auguſt 14, at 7 at Night the Sun is Totally Eclipſed in *Virgo* 3 Degrees, Vertical to a little Sea Weſt of *New Spain* Latitude 10° North, Longitude 115 Weſt, 7 h. 40′; Viſible at *New Spain*, *Jamaica*, *Terra firma* and all the Places near thereunto.

1757, *February* 7, at 1 Afternoon the Sun is 7 Digits Eclipſed on the South ſide, in *Piſces* 0° 9′, then Vertical to the *Ethiopian* Ocean South of *Aſcenſion Iſland*, Latitude 11 Degrees South, Longitude 14° Weſt, 1 h. Viſible in the Ocean above mention'd.

Auguſt 3, at 11 at Night the Sun is 5 Digits Eclipſed on the upper, or North ſide, in *Leo* 22 Degrees, Vertical to the *Oceanus Magnus*, Latitude 14 North, Longitude 165 Weſt 11 h. Viſible to the unknown Southern Seas.

Decem-

December 29, at 6 at Night the Sun is Eclipſed near 2 Digits on the North ſide, in *Capricornus* 19′, Vertical to the Pacific Ocean, Latitude 21 South, Longitude 90 Weſt 6 h. Viſible about *Hudſon*'s Bay, &c.

1758, *January* 28, 26′ paſt 4 in the Morning the Sun is Totally Eclipſed in *Aquarius* 19 Degrees, Vertical to the Sea, South of the Iſland *Java* in the *Eaſt Indies*, Latitude 15 South, Longitude 110 Eaſt, 7 h. 20′, Viſible in the South Seas.

June 24, at 55′ paſt 8 in the Morning the Sun is Eclipſed 3 Digits on the South ſide, in *Cancer* 13 Degr. he is Vertical to *Arabia*, a little Eaſt of the Red Sea, Lat. 23° North, Longitude 41 Eaſt, 2 h. 44′. It may be ſeen by thoſe that ſail to the *Eaſt Indies*, at the *Cape of Good Hope* ,&c.

July 9, at 44′ paſt 4 in the Afternoon the Moon is Ecliſped in *Capricornus* 28 Degr. then Vertical to the Sea, Weſt of *New Holland*, Latitude 21 Degrees South, Longitude 107 Eaſt, 7 h. 8′, Viſible to all the South Eaſt Parts of *Africa*, to *Madgaſcar*, to *Turkey* in *Aſia*, to *Tartary*, *Perſia*, *China*, and to all the Iſlands adjacent; this Eclipſe will be Total with Continuance, Digits 15.

December 20, at 30′ paſt 7 in the Morning the Sun will be Eclipſed 6 Digits on the North ſide, in *Capricornus* 9 Degrees, and then Vertical to the Oriental Ocean Eaſt of *Madagaſcar*, Latitude 23 South, Longitude 67 Degrees Eaſt, 4 h. 26′; ſeen in *Perſia* and *Great Tartary*.

1759, *June* 13, at 13 paſt 5 in the Afternoon the Sun is Eclipſed in *Cancer* 3 Degrees, Vertical to the Sea a little North, of the great Iſland *Cuba*, Latitude 23 Degr. North, Longitude 80 Degr. Weſt, 5 h. 20′. This Eclipſe will be Total, and Viſible to *South America*, &c.

December 8, at 14' paſt 2 in the Afternoon the Sun Eclipſed in *Sagittarius* 27 Degrees, he is then Ver- cal to the Sea a little Eaſt of Cape *Frio* in *Braſil*, atitude 23 Degrees South, Longitude 33° Weſt, 2 h. 2'. This Eclipſe is Total and Central to the Sou- ern Parts of *America*.

1760, *November* 26, at 2 in the Afternoon the Sun is clipſed in *Sagittarius* 16 Degrees; Vertical to the aſt of *Braſil*, Latitude 23° South, Longitude 30 Eaſt, h. Viſible in the Southern Seas, 6 Digits on the South de.

1761, *April* 23, 40' paſt 5 Afternoon the Sun will e Eclipſed near one Digit on the South ſide, in *Taurus* 5°, then Vertical to the North-Eaſt Coaſt of *New Spain*, Latitude 17°, Longitude 85° Weſt, 5 h. 40'; Viſible in the Southern Parts of the World, near the Straits of *Magellan*.

May 23, at 1 in the Morning the Sun is Eclipſed 2 Digits on the North ſide, in *Gemini* 13°, then Vertical to the Oriental Sea, Latitude 22 Degr. North, Longitude 165 Eaſt, 11 h. Viſible only to the Northern Frozen Seas.

October 16, at 30' paſt 10 at Night, the Sun is Eclipſed, ſcarce one, Viſible in the Artic Circle.

November 1, near Noon, the Moon is Totally Eclipſed in *Taurus* 20 degrees, then Vertical and Viſible to the great Ocean between *Aſia* and *America*; alſo ſeen in *Perſia*, *China*, Great *Tartary*, all the Eaſtern Iſlands, and in the North-Weſt Parts of *America*.

November 15, at 2 in the Afternoon the Sun is Eclipſed iu *Sagittary* 5 degrees. This is a very ſmall Eclipſe, hardly worth taking notice of; it is ſeen in the Antartic Circle.

1762, *April* 13, at 28' paſt 5 in the Morning, the Sun is Eclipſed 9 digits on the South ſide in *Taurus* 4 degrees

degrees, then Vertical to the Southern Parts of *India* beyond the *Ganges*, Lat. 30 degrees North, Long. 100 Eaſt, 6 h. 40′, Viſible in the Oriental Ocean.

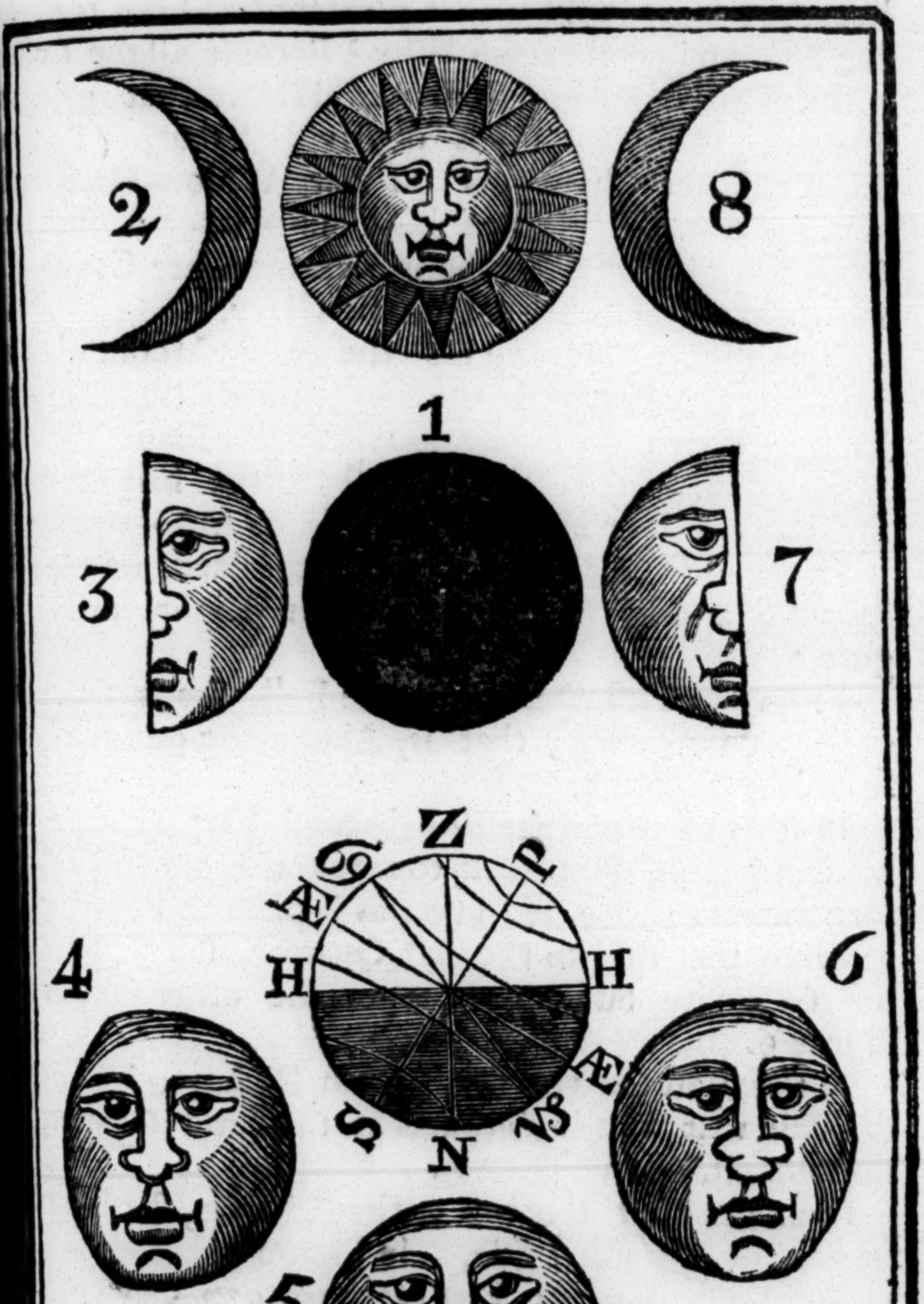
1763, *April* 2, at 15′ paſt 10 in the Forenoon, the Sun is Eclipſed in *Aries* 23 degrees, then Vertical to *Æthiopia*, Latitude 9 degrees North, Longitude 29 Eaſt, 1 h. 44′. This Eclipſe will be Total and Central, conſpicuous to all *Africa*, and part of *Aſia*.

Sept. 26, at 1 in the Morning, the Sun is Eclipſed in *Libra* 13 degrees; he is then Vertical to the Eaſtern Ocean, Latitude 5 degr. South, 170 Eaſt Longitude, 11 h. 8′. This is alſo a Total Eclipſe, but not Central. It will be little ſeen, by reaſon it falls ſo remote from any known Country.

This general View of Eclipſes, I hope, will ſatisfy the Curioſity of the Courteous Reader: For (in my Opinion) a more particular Account of them wou'd be rather tedious than entertaining.

Note, that the North ſide of the Moon is the upper ſide, as view'd by us; and the South ſide, the lower ſide: For if the Moon has South Latitude, the Sun's Eclipſe is on the South, or lower ſide; but the Moon's Eclipſe is always on the contrary ſide. If her Latitude be South, her North, or upper ſide is obſcur'd: But if her Latitude be North, the Eclipſe is on the South ſide. The Moon's Eclipſe begins on the Eaſt ſide, and the Sun's Eclipſe on the Weſt ſide.

The ſeveral Faces of the Moon.



Theſe are the ſeveral Faces the Moon makes at us but ſhe always looks with a pleaſant full Face toward the Sun, and good reaſon Why? Becauſe all the Luſte of her Opake Viſage is borrow'd from that gloriou Planet: And when ſhe is depriv'd of that, (I mean Eclipſed) ſhe then puts on her Widow-Dreſs and mourns for the Loſs of his Countenance: But not Staggering in the dark, ſhe ſtill purſues her Courſe till ſhe again repoſſeſs her precarious Glory.

The Figure 1. repreſents the New Moon, when it is in Conjunction with the Sun; the dark Side of her Body is then towards the Earth (as *per* Figure) and ſo is Inviſible. From the Change to the firſt Quarte ſhe is falcated, or bent like a Sickle, as in Figure 2.

In the firſt Quarter ſhe is Dichotomized, or cut ju in two, and has then half of her Light, as in Figure 3.

From the Firſt Quarter to the Full, ſhe is Gibbou or in her Gibboſity; that is, Abunching out as repreſented by Figure 4.

In the Full Moon the Enlightened Part which is towards the Sun, is turned towards the Earth; therefore appears with a full Face, as is plain in Figure 5.

From the Full to the laſt Quarter, ſhe is again her Gibboſity bunching out on the other ſide, as Figure 6.

In the Laſt Quarter ſhe is again Dichotomized; an that ſide that was in darkneſs at the Firſt Quarter, Enlightned, as in Figure 7.

From the Laſt Quarter to the Change, ſhe is aga falcated on the other ſide, as in Figure 8.

And theſe Various Phaſes the Moon ſhews to t Inhabitants of the Earth about (according to her middle Motion) 29 Days and a half.

The Sun and the Earth are plain to any Eye, without being figured. The Earth is the true Stereographical Projection of the Sphere to the Elevation of th

Po

Pole at *Edinburgh* ; where P repreſents the North Pole, S the South Pole ; and upon theſe Poles, or Axis, the World is ſuppos'd to turn ; becauſe they are the only Points in the Whole Frame of Nature that ſeem to be fix'd.

Z repreſents the Zenith, or the Point juſt over our Heads, N the Nadir, or that Point in the Heavens, which is directly under our Feet diametrically oppoſite to the Zenith.

The Line, Z N, is the prime Vertical, or Eaſt and Weſt Azimuth, upon which the Sun is at 6 o'Clock, when he is in the Equinoctial, Æ Æ.

♋, repreſents the North Tropic Line, in which the Sun enters the 10th of *June*, and Riſes near H, on the Right Hand, where you ſee that Line cut the Horizon, and is upon the Line P S, at 6 o'Clock, and comes up at Noon to ♋.

When the Sun comes to this Line (P S) it is always 6 o'Clock, whether it be above, or below the Horizon.

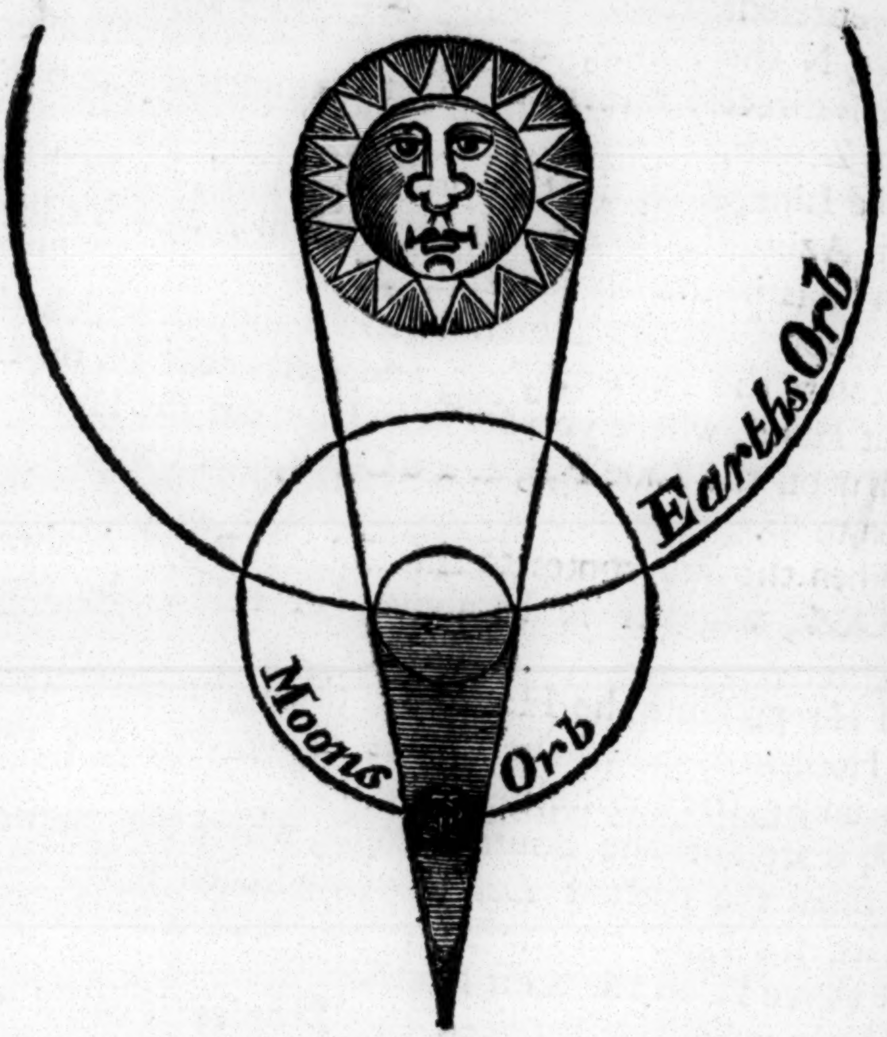
H H repreſents the Horizon ; the light Part above the Horizon is called the *Viſible Hemiſpere* ; the dark Part under, the inviſible.

♑, repreſents the South Tropic, where the Sun enters about the 10th of *December*, and then Riſes where you ſee this Line cut the Horizon ; and is at Noon a little above H on the Left Hand.

The broad Circle between the Tropics is call'd the *Ecliptic*, or the *Sun's Path* ; thro' the middle of which paſſes the Equinoctial Line.

North and South of the Tropics are the Temperate Zones, in the Northern of which we live ; and next to the Temperate Zones are the Polar Circles, &c.

A Type of the Moon's Eclipſe.



THis Diagram repreſents the Manner in which the Moon is Eclipſed: The Moon reſpects the Earth for her Center, and moves round it once every Month. Now the ſhadow of the Earth extending it ſelf far beyond the Moon's Orbit, muſt of neceſſity ſometimes fall in the Moon's Way; and this happens when ſhe is within 12 Degrees of either of her Nodes, commonly call'd the *Dragon's Head* and *Tail*; and when the Sum of the Moon's Latitude and Diameter

are

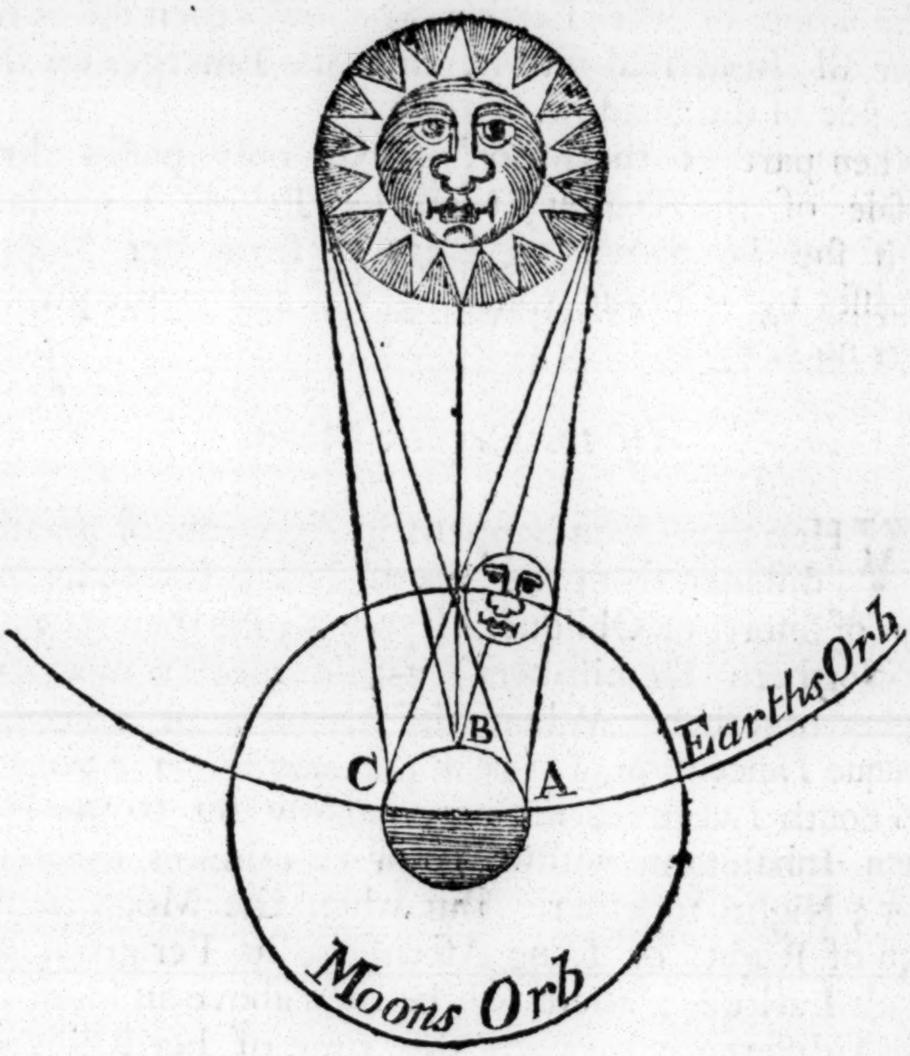
leſs than the Diameter of the Earth's Shadow, en ſhe continues Totally dark, ſometimes above an our and a half: But when the Sum of the Moon's atitude and her Diameter are equal to the Diameter f the Cone of the Earth's Shadow, then ſhe is no oner all Immerſed into it, than ſhe Emerges on the her ſide of the Shadow.

When part of the Moon's Body only paſſes thro' ne ſide of the Shadow, then the Eclipſe is partial; ut if ſhe be above 12 Degrees from her Nodes, e paſſes by without touching it, and conſequently ffers no Eclipſe.

Of the Harveſt-Moon.

WHen the Moon happens in Apogeon, or greateſt diſtance from the Earth, North Latitude, in a Sign of Short, or Oblique Aſcenſion; ſhe then Riſes (in he Northern Hemiſphere) within 9 or 10 min. two Nights together. When the Moon is in a Sign of Oblique Deſcenſion, (in or about *Auguſt*) in Apogeon, and South Latitude, ſhe may poſſibly ſet to the Northern Inhabitants within 10 or 12 minutes difference 2 or 3 Nights together. But when the Moon is in a Sign of Right, or Long Aſcenſion, in Perigeon, and South Latitude, there will be then above an Hour and a half difference between the time of her Riſing one Night, and that of the next Night, to the Inhabitants of *Great Britain*. And if the Moon has North Latitude, in a Sign of Right, or Long Deſcenſion, and in Perigeon, or Leaſt Diſtance from the Earth, ſhe then ſets an Hour and a half Later, *&c.*

A Type of the SUN's *Eclipſe.*



THat the Sun's *Eclipſe* is Total to one part of the Earth, to another partial, and to a third at the ſame time no Eclipſe at all, is proved from this Figure. An Obſerver at A ſees the Sun Totally Eclipſed; one at B ſees him half Eclipſed; but one at C ſees no Eclipſe at all.

The Names and Characters of the Sun, and the 7 Planets.
Sun ⊙, Saturn ♄, Jupiter ♃, Mars ♂, Earth ◒, Venus ♀, Mercury ☿, Moon ☽.

The

The Greateſt and Leaſt Diſtances of the Planets *from the* Sun, *and from the* Earth, *in* Engliſh *Miles.*

		From the *Sun.*			From the Earth.
♄	Greateſt	607.465.956	♄	Greateſt	608.227.429
	Leaſt	541.946.387		Leaſt	542.625.730
♃	Greateſt	353.520.704	♃	Greateſt	353.964.314
	Leaſt	320.996.275		Leaſt	321.399.072
♂	Greateſt	146.001.785	♂	Greateſt	122.440.508
	Leaſt	121.156.610		Leaſt	101.604.764
⊕	Greateſt	110.467.018	☉	Greateſt	110.467.018
	Leaſt	106.791.012		Leaſt	106.791.012
♀	Greateſt	94.347.947	♀	Greateſt	134.017.363
	Leaſt	9.347.947		Leaſt	15.165.311
☿	Greateſt	80.353.739	☿	Greateſt	97.171.952
	Leaſt	52.914.839		Leaſt	37.988.985
☽	Greateſt	110.756.016	☽	Greateſt	258.998
	Leaſt	106,567.876		Leaſt	223.130

When the Earth is at a mean Diſtance from the Sun, the Cone of the Earth's Shadow is 214 Semi-diameters of the Earth, equal to 852700 Engliſh Miles.

The Earth's Circumference	25035	Engliſh Miles.
The Earth's Diameter	7969	
Height of the Atmoſphere	47	

Of the Magnitudes of the Planets.

S*Aturn* is two hundred and ninety eight times greater than the *Earth* ; *Jupiter* is, five hundred and ſeventy ſeven times greater than the *Earth* ; *Mars* is fifteen times leſſer than the *Earth* ; the *Sun*, is two hundred fifty eight thouſand three hundred and nine times greater than the *Earth* ; *Venus* is three times leſſer than the *Earth* ; *Mercury* is twenty ſeven times leſſer than the *Earth* ; the *Moon* is fifty times leſſer.

The Explantion of the following Syſtem.

THis Syſtem was firſt invented by *Phythagoras* the *Samian*, who flouriſh'd 509 Years before the Birth of Chriſt ; but after his time it lay dormant 'till *Nicholas Copernicus* revived it, from him call'd the *Copernican Syſtem.* It's likewiſe called the *Solar Syſtem* ; becauſe *Sol*, or the *Sun* is placed in the Center. It has now gain'd the Eſteem of the Learned Part of the World.

The *Sun* is in the Center, that great and glorious Fire of the Univerſe, ever burning, but not conſuming, plac'd there by our Wiſe Creator, to impart it's reviving Rays, Light and Heat to the other Parts of the Viſible Creation : For the *Earth*, and all the other Stars borrow their ſparkling Luſter from the *Sun*. One ſide of the *Earth* being always enlightened, it appears to the other Stars, as they do to the Earth.

The *Sun* has a Rotation upon his own Axis, which he finiſhes in twenty five Days and a quarter : Next to the *Sun*, is *Mercury* ; He makes one Revolution round the Sun in his Orbit in 87 Days, 23 Hours, 15 Minutes. His Daily Motion is 4 Degrees, 5 Minutes. *Mercury* keeps always ſo near the Sun, and ſhines with ſo great a Luſter, that his Spots cannot be diſcover'd, by which Reaſon his Rotation cannot be certainly determined. But it is very Rational to conjecture, that he has ſome Spots, as well as his Fellow-Creatures ; for the brighteſt of all Viſible Creatures (I mean the *Sun*) is not without Spots : And indeed when I look over the brighteſt of my own Acquaintance, I can find none without Spots : But by the bye, I wou'd have you to know, that all Spots are not Blemiſhes, but very much contribute to the Perfection and Beauty of a great many Creatures of ſeveral Species.

Mercury according to his mean Motion, is conjoin'd with the *Sun* once in 115 Days ; he is never above 28 De-

Degrees from the *Sun.* Next above *Mercury,* is *nus* ; Vulgarly call'd the *Morning* and *Evening-Star*: he is the moſt ſplendid of all the Planets ; rolls round he *Sun* in 224 Days, 16 Hours, 49 Minutes: Her ean Daily Motion is 1 Degree 36′, and turns round er Axis once in 23 Hours : She is conjoyn'd with the *un*, according to her middle Motion, once in 584 Days, ever found above 48 Degrees from the *Sun.*

By the Motion of theſe two Inferior Planets, we are ery well aſſur'd of the Earth's Motion: For if their rbs circumſcrib'd the Earth's Orb, then once in eve-y Revolution, the Earth wou'd interpoſe between hem and the *Sun* ; but ſuch a Phenomenon has never een obſerv'd.

See the Learned Mr. *Char. Leadbetter's Syſtem of the lanets demonſtrated.*

Next above *Venus,* is the *Earth* with the *Moon* moving round it. The Earth performs one Revolution round the Sun (and her Handmaid the Moon along with her) in 365 Days, 5 hours, 49′. The Earth has a ſecond Motion upon her Axis, from Weſt to Eaſt, which ſhe performs in 24 Hours : This is the cauſe of Day and Night, (and according to appearance) the Riſing and Setting of the heavenly Bodies.

A Third Motion the Earth has, which is from South to North, and from North to South, which in reſpect of the Equinox, is the cauſe of Summer and Winter.

The Moon moves round the Earth in 27 Days, 7 h. 43′. in which time ſhe turns upon her own Axis. Next above the Earth, is *Mars*, of a red fiery Colour, moves round the Sun in one Year, 321 Days, 23 Hours, 27 Minutes; according to which middle Motion, there are two Years, and fifty Days between every Conjunction with the Sun.

Jupiter is next above *Mars*, with his four Attendants, called *Satellites* or *Moons*, with which he moves round the Sun in his Orbit in 11 Years, 317 Days, 12 h. 20′ According to which motion, in 398 Days he is in

Conjunction with the Sun; his mean daily Motion is 5′ his Shadow does not reach *Saturn's* Orbit. He is obſerved with Rings or Belts round him, &c.

Note, That the Planets are not placed in the Syſtem according to their true Diſtances, (for the ſmallneſs of the Page wou'd not permit it without Crouding *Mars* and the Inferiours Planets too near the Center;) And that the Shadow of *Jupiter* does not reach the Orbit of *Saturn*, tho' in this Diagram it goes beyond it. But the Diſtances of the Planets from the Sun and from the Earth being already given, ſufficiently ſupplies what cou'd not be diſtinctly done in the Syſtem.

The Length of the natural Day in each Planet is equal to the time of their Rotation about their Axis.

Saturn is the Higheſt Planet in the Syſtem, and moves ſlowly round the Sun with his five Moons about him, in the ſpace of 29 Years, 174 Days, 6 h. 36′; his Daily motion is two minutes; and every 378 Days is conjoin'd with the Sun: His Spots cannot be ſeen, becauſe of his Immenſe Diſtance from us; whereby to determine his Rotation; but by ſome Aſtronomers he is ſuppoſed to turn round upon his Axis in 29 Days, 10 h. 1′.

Beſides what is above ſaid, *Saturn*, *Jupiter Mars*, *Venus* and *Mercury* have a Direct, and a Retrograde Motion

A Planet is ſaid to be Direct, when it moves according to the right Order of the Signs from *Aries* to *Taurus*; and Retrograde, when it ſeems to go back from *Aries* to *Piſces*: And upon the turn between theſe contrary Motions, the Planet is ſaid to be Stationary, or at a ſtand.

But in Reality theſe Planets go always Direct, as well as the Earth and the Moon; and this Retrograde Appearance to us is cauſed by the Earth's motion.

Mars and *Venus* are obſerved to have their Increaſe and Decreaſe of Light as well as our Moon.

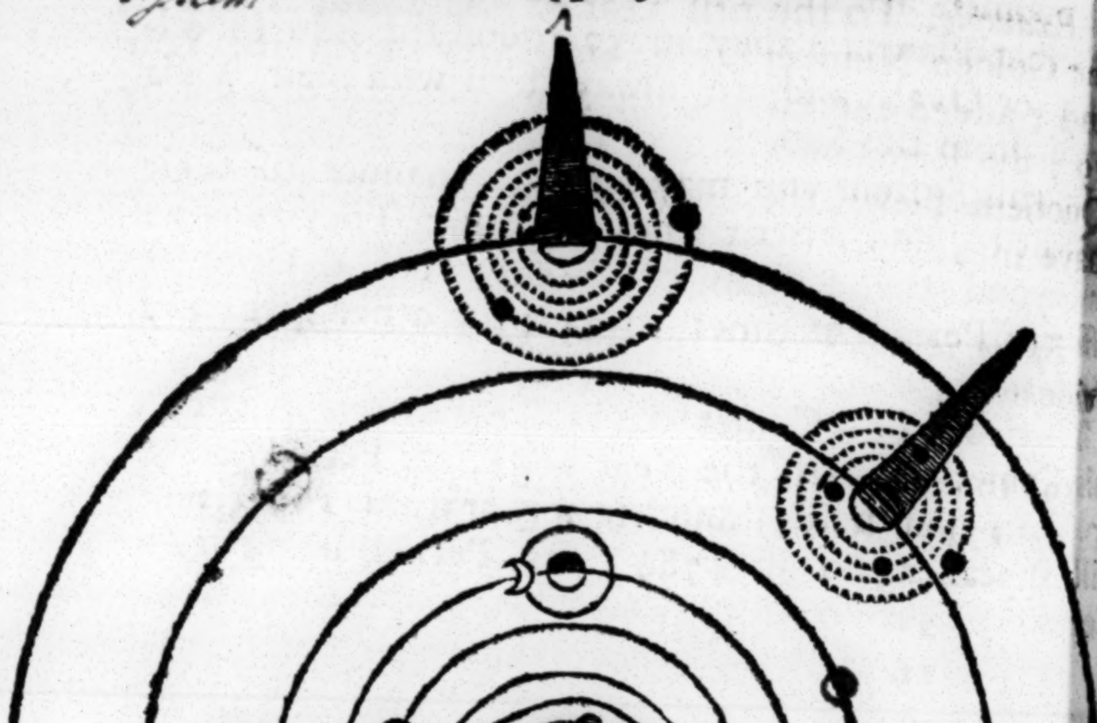
The Comets, or what we call Blazing Stars, by Aſtronomers are found to be of the ſame Species with the other Planets; they move round the Sun in Ellipſis, or Oval, and are always ſeen with their Tails turn'd from the Sun.

In this Syſtem you may ſee the manner of their Deſcent to, and Aſcent from the Sun: They remove far beyond the Syſtem of *Saturn*; but deſcend at different Periods of times to Viſit the other Planetary Worlds.

There will be a Comet ſeen in *Great Britain* in 1758; this Comet was ſeen the Year 1682, its Period being 75 Years and half; another appear'd in 1661, and will appear again in 1789; its Period being 129 Years.

System

The True ~~Type~~ of the World.



RULES *to find the common Notes of the Year, and t continue the Changes and Eclipſes.*

For the Golden Number.

I Was the Golden Number the Year our Saviour wa born; therefore to find this Number for any Yea propos'd, you muſt add 1.

Example, To the firſt Year of our Lord, I add 1; he Golden Number is 2, *&c.* Now when the Year nd 1 added exceed 19, the Sum muſt be divided by 9; the Remainder is the Golden Number, and the Quotient ſhews the Revolutions the Sun and Moon ave made ſince the Birth of Chriſt.

Example 2. For 1734, add 1, 1735, which I divide by 19.

19) 1735 (91 the Quotient is 91
171 Revolutions ſince the Birth of Chriſt

25
19

Rem. 6 Golden Number for 1734.

When nothing remains, 19 is the Golden Number; becauſe that is the Laſt Year of the Revolution. See Page 13.

For the *Britiſh* Epact, Multiply the Golden Number by 11; if the Product is under 30, it is the Epact for the Year propoſed; But if the Product exceed 30, divide the Sum by 30, the Remainder is the Epact.

Example, For 1734, Golden Number 6. Multiplied by 11, gives 66, divide by 30) 66 (2. Remain 6, Epact.

For the *Roman* Epact. Now becauſe they are 11 Days before us, (See Page 8.) you muſt Subtract 11 from the *Britiſh* Epact, and the Remainder is the *Roman* Epact: But when Subtraction cannot be made, add 30.

Example for 1734. The *Britiſh* Epact 6; becauſe I cannot ſubtract 11 from 6, I add 30, the Sum is 36; from

from which I take 11, and there remains 25, the *Roman* or *Gregorian* Epact.

Example 2. 1798, the *Britiſh* Epact 23; from which take 11, remains 12, *Roman* Epact. See Page 23.

For the *Britiſh* Dominical Letter. Divide the Year of our Lord by 4; then add the Quotient, and 4 to the Year, and divide the Sum by 7; the laſt Remainder ſubtract from 7, gives the Number of the Letter.

For Example, 4)1734(433---Rem. 2
433 ----
Add 4
------- 7
7)2171(310---Rem. 1

Equal to F---6
See Page 7.

But when no Remainder happens, 7 is the Number of the Letter.

Note, After the firſt Diviſion, if nothing remains, it is Leap-Year; if 1 remains, the firſt after; if 2, the ſecond; if 3, the third after Leap-year.

For the *Roman* Letter. Divide the Year by 4, and the Year, and its fourth part by 7, and the laſt Remainder ſubtract from 7, gives the Number of the Letter.

Example. 4)1734(433--- Rem. 2.
433
------
7)2167(309
4 Rem. 4.

Rem. 3 or C. See Page 9.

The

The Letters muſt be thus number'd:

1	2	3	4	5	6	7
A	B	C	D	E	F	G.

For the Cycle, or Circle of the Sun. Add 9 to the ear of our Lord, divide the Sum by 28, the Reainder is the Cycle of the Sun.

```
Example.        1734
  Add              9
               -------
          28)1743(62
              168
             -------
                63
                56
               ----
    Rem.        7 Cycle of the Sun.
```

9 Being the Circle of the Sun the Year our Redeeer was born, I wou'd know what Day of the Week it as on? To find which, I muſt look for 9 under the heTitle *Cycle of the Sun* in the firſt Table, Page 4, and gainſt 9 under *December* is *Wedneſday*; entering the ext Table with *Wedneſday*, I find the 25*th*, of *Decemer* fell on *Saturday*, which was the Sabbath. On hich Day the Lord of the Sabbath condeſcended to e born.

Again, entering the Table, Page 7, with 9, Cycle of e Sun, I find the Dominical Letter (it being Leapear) to be DC; now I enter the Table, Page 21, with , and Golden Number 1, (as before mention'd) by hich I find the Number of Direction to be 21; from hich I Subtract 10; the Remainder is *Eaſter Day* *April* 11.

Ex-

Example 2. I wou'd know the Cycle of the Sun the Year of Chriſt 33; to which I add 9. Sum is 42.

$$\begin{array}{r} 28)\,42\,(1 \\ 28 \\ \hline \end{array}$$

Remains 14 Cycle of the Sun

And by the foregoing Rule I find the third of *April* was the *Friday* on which Day our gracious Lord finiſh'd the great Work of Redemption, and offered himſelf up a Sacrifice for the Sins of the People, while they were yet his Enemies! On the fourth Day was kept the Paſſover of the *Jews*. The fifth Day, which was the firſt Day of the Week, the Victorious Captain of our Salvation Roſe from the Dead, having conquer'd Hell and Death, and all Infernal Powers, and ſaluted his Diſciples with Peace, Life and Immortality! And in grateful Remembrance of which, his Apoſtles changed their Sabbath from the Seventh to the firſt Day of the Week, now properly call'd the *Lord's Day*.

Now, this Feaſt, Vulgarly call'd *Eaſter*, might mo properly be call'd the Chriſtian Paſſover, or the Reſurrection of Chriſt; rather than go by the Name o that Concubine of Satan; (for *Eaſter* was a Rotten Goddeſs of the Heathen *Saxons*.)

To find the Age of the Moon, according to her middle Motion. Firſt, look for the Epact for the Year propoſed; add the Epact, the Month of the Year, and the Day of the Month together: If the Sum be under 30, it is the Moon's Age But if it exceed 30, divide the Sum by 30, the Remainder is the Moon's Age.

The Months muſt be Number'd as under writ-
n.

0	2	1	2	3	4
Jan.	*Feb.*	*Mar.*	*Apr.*	*May*	*June*
5	6	8	8	10	10
July	*Aug.*	*Sept.*	*Oct.*	*Nov.*	*Decem.*

Three EXAMPLES.

Jan. 1, 1734.		*Dec.* 31, 1734.		*Dec.* 31, 1747.	
Epact	6	Month	10	Epact	29
Month	0	Day	31	Month	10
Day	1	Epact	6	Day	31
☽'s Age	7		47	div. by 30(70(2	
		Subt.	30		60
		☽'s Age	17		10
				Moon's Age	10

Having the Age of the Moon, to find her Southing. ltiply the Moon's Age by 4; divide the Product ; and as often as you find 5 in it, ſo many Hours, every Unite of the Remainder goes for 12 Mi-
s.

EXAMPLE.

Moon's Age	7
Multiply by ---	4
Divide by ---	5)28(5h.
	25
The Remander	3--or 36

Moon Souths 36 Min. paſt 5 in the Afternoon.

EXAMPLE 4.

Moon's Age 17
Subtract 15

Remains 2
Multiplied by 4

Divide by 5)8(1h.
5

3 -- or 36'

Moon Souths 36 Min. paſt 1 in the Morning.

The Moon comes to the South the 7th Day of her Age, 36 Minutes paſt 5 in the Afternoon. In the Moon's Decreaſe, or when ſhe is paſt 15 Days old, you muſt ſubtract 15, and ptoceed with the Remainder as in this Laſt Example. Now to find when it will be high Water at *London*-Bridge, add 3 Hours to the time of the Moon's Southing, and you have the time deſired.

For the Day of New Moon, add the Epact and the Month propos'd together; ſubtract the Sum from 30, the Remainder is the Day of New Moon: When the Epact and Month thus added together, Exceed 30, then ſubtract it from 59; the Remainder is the Day requir'd.

Example 1734

Month 3
Epact 6

9
Subtract from 30

New Moon 21

Example 2, 1744

Epact 26
Month 6

32
Subtract ftom 59

New Moon 27

For the Day of Full Moon, add the Epact and onth together; ſubtract the Sum from 15; but en Subtraction cannot be made, borrow 30, which ke 45, and the Remainder gives you the Day of ll Moon.

Example	1734	Example 2,	1744
Epact	6	Epact	26
Month	4	Month	6
	10		32
Subt. from	15	Subt. from	45
Full Moon	5	Full Moon	13

The Period of Eclipſes (according to the Learned *Haley*) is 18 Years; 10 Days, 7 h. 43 min. in Leap-ar 11 Days, 7 h. 43 min. For Example, in 1744 the on is 8 Digits Eclipſed *April* 15, 32 Minutes paſt 8 the Afternoon; I wou'd know when this Eclipſe rns?

ample. Sun is Eclips'd	D.	h.	'		Example 2. Sun is Eclips'd	D.	h.	'	
44. *Apr.*	15	8	32	a.	1746. *Mar.*	11	2	54	m.
18	11	7	43	a.	18	10	7	43	m.
62. *Apr.*	27	4	15	m.	1764. *Mar.*	21	10	37	m.

This is the beſt general Rule that can be given to tinue Eclipſes from one Year to another; and may e well enough for common uſe to examine Eclipſes ; but not to truſt to for the exact Quantity, and the ciſe Time.

To find the Roman *Indiction.*

ADD 3 to the Year of our Lord; divide the Sum by 15, the Remainder is the *Number of Indiction*; and the Quotient ſhews how many Years ſince Tribute was paid to the *Romans*: For once in 15 Years, all thoſe Nations that were under their Monarchy, paid them Tribute.

Example. Add 3 to this preſent Year 1734, which makes 1737, divided by 15, gives in the Quotiant 115, Multiplied by 15, gives 1725, Years ſince Tribute was firſt paid; the Remainder is 12, Years ſince Tribute was laſt paid. See the Work.

```
15)1737(115
   15
   ——
    23
    15
    ——
     87
     75
     ——
Rem. 12
```

The Table, Pages 21, and 22, ſhew the Number of Direction in both Accounts forever.

To find *Eaſter*, Subtract the Epact of the Year propos'd, (if it be under 28) from 47; but if the Epact be 28, or 29, ſubtract it from 77, the Remainder is *Eaſter* Limit; which if it be leſs than 32, it is in *March*, if it be above 31, in *April*: The next *Sunday* after the Limit thus found, is *Eaſter-day*.

Example. The Epact for 1734. is 6, ſubtracted from 47, there remains 41; ſubtract from 41, 31, the Number of Days in *March*, there remains 10. Now look in the Table, Pag. 4, and 5, and you'll find the next *Sunday* after the 10th of *April* to fall on the 14th of the ſame Month.

Example 2. The Epact for 1736. is 28, Subtracted from 77, there remains 49; from which take 31, there remains 18, *Eaſter* Limit in *April*; which Day falls on *Sunday*, and next *Sunday* after is *Eaſter-Day*, *April* 25. The Year 1741, the Epact is 23, the Limit 24, *Eaſter-Day March* 26, &c.

Of Years, Months and Days ; firſt, of Years.

THE Natural Solar Year, is that ſpace of time the Sun takes to go thro' the 12 Signs of the Zo-ack ; that is, from one Point of the Ecliptick till return to the ſame again, and contains 365 Days, 5 ours, 49 Minutes, 26 Seconds.

A ſyderial Year is the time the Sun takes in going m any fix'd Star, till He overtake the ſame Star ain, containing 365 Days 6 h. 9 min.

The Lunar Year conſiſts of 12 Lunations, or Sy-dical Months ; and is leſs than the Solar Year by Days ; which 11 is call'd the *Epact*, made uſe of to d the Moon's Age, &c.

The Civil Year is that which is in common uſe a-ong Nations, and varies according to their differe-t Accounts of time.

The *Julian* Year conſiſts of 365 Days, 6 Hours ; t the 6 Hours are omitted for 3 Years ſucceſſively, d are taken in the 4th Year, then making up 24 ours, or a natural Day, which is added to *February*, then Days.

Note, The common Year contains 52 Weeks and e Day ; but if a Year contain'd only 52 Weeks, e Day of the Month wou'd always fall on the ſame y of the Week ; but the odd Day cauſes the Day of e Month to fall one Day later every Year in the der of the Week-Days.

In *Biſſextile* or Leap-Year two Days later, the *ulian* Year is 10 Minutes, 34 Seconds more than the ue natural Year.

This Account of time was ſettled by *Julius Cæſar* Years before the Birth of our Saviour ; and is ſtill uſe in the *Britiſh* Dominions, by the *Moſcovites*, *rians*, *Abiſſines*, *Æthiophians*, &c. (the Names of their

Months

Months differ.) The Vulgar Year in *Great Britain* begins on the 1ſt *January*, the Eccleſiaſtical Year on *March* 25; on which Day the Joyful Meſſage was brought to the bleſſed Virgin.

The Aſtronomical Year begins at the Vernal Ingreſs, (now the 9th of *March.*)

The *Gregorian* Year contains 365 Days, 5 Hours, 49 Minutes, 2 Seconds; which is leſs by 24 Seconds than the true Solar Year.

The *Gregorians* have their common Years and Leap-Years the ſame with the *Julians*, except it be at the End of a Century, or 100 Years.

For Example; the Years 1700, 1800, 1900, (all Leap-Years in the *Julian* Account;) but the *Gregorians* omitting the 29th of *February* get before us in reckoning of the Month in that Space of Time 3 Days: But in the Year 2000, they take in the Leap-Day, and by that means the difference between the two Accounts (13) is the ſame as in the Year 1900. See the Table, Page 8.

The *Gregorian* Year begins the firſt of *January* equal to the 21ſt of the *Julian December*.

This Account is received by all the Countries that profeſs Subjection to the See of *Rome*.

The *Arabians*, *Indians* and *Turks* account by the Moon.

The *Jews*, or *Hebrews* (in remembrance of their departure out of *Ægypt*) begin their Eccleſiaſtical Year the 14th of the firſt Month; and the firſt New Moon after the Vernal Equinox begins the 1ſt Month call'd *Niſan*, which takes in part of our *March* and *April*.

Tiſri, or the 7th Month, begin their Civil Year; the 1ſt New Moon after Antumn Equinox begins the Month; it takes in part of our *September* and *October*.

Of the Four Quarters of the Year.

1 Of the Spring-Quarter.

THE Spring, or Vernal Quarter begins the 9th of *March*, when the Sun enters *Aries*, or the *Ram*; e Sun is then ſaid to be in the Equinoctial Line, aking Day and Night of Equal Length to all parts of e World. But this muſt be thus underſtood; that e Sun then appears equally in both the Northern d Southern Hemiſpheres. For there are two Places the Earth where the half of the Sun only is ſeen on ſe Equinoctial Days.

irſt then, theſe Places may be ſaid to have equal y and Night at the ſame time; becauſe the half of great Light which rules the Day is above their rizon, and the other half under.

econdly, They may be ſaid to have neither Day Night; becauſe they have not the Sun wholly ve their Horizon, nor altogether depreſt un-

hirdly, They may be ſaid to have no Night at all, auſe they have no Darkneſs. See Page 40.

his Quarter continues while the Sun is travelling ' *Aries*, *Taurus* and *Gemini*.

. The Summer-Quarter begins about the 10th of e, when the Sun enters *Cancer*, or the *Crab*, making longeſt Day in the Northern Hemiſphere, and inues while the Sun is running thro' *Cancer*, and *Virgo*.

. The Autumn, or Harveſt-Quarter begins the h of *September* when the Sun enters *Libra*, or Scales; when Day and Night are equal all the rld over, except under the Poles. This Quarter con-

continues while the Sun is Marching thro' *Libra,* *Scorpio* and *Sagittary.*

The Winter-Quarter begins the 10th of *December,* when the Sun enters *Capricorn,* or the *Goat,* which is the ſhorteſt Day with all the Inhabitants on the North ſide of the Equator. This Quarter continues all the time the Sun is paſſing thro' *Capricorn, Aquarius* and *Piſces.*

Theſe Signs are only certain Conſtellations, or Companies of fixt Stars, lying in the Sun's yearly Path; and are imagin'd to repreſent the Form of thoſe Animals by whoſe Names they are call'd.

Of the Twelve Months of the Year.

THE Months are variouſly reckon'd, as well as the Year, and are either *Aſtronomical* or *Political.*

1 *Of the Aſtronomical Month.*

THE Solar Month, is that ſpace of time the Sun takes in paſſing thro' one of the 12 Signs of the Zodiack; and is, (according to his middle Motion) 30 Days, 10 Hours, 29 Minutes, 6 Seconds: But this Month varies according to the true, or apparent motion of the Sun.

The Lunar Months are three.

1. The Periodical Month, is the time in which the Moon performs her Journey thro' the 12 Signs; and is (according to her middle Motion) 27 Days, Hours, 43 Minutes, 7 Seconds.

2. The Synodical Month, is the time between one Conjunction and another, with the Sun; which, (according to her mean Motion) ſhe performs in 29 Days, 12 Hours, 44 Minutes.

3. T

3. The Month of Illumination, or Appearance, is 8 Days, or 4 Weeks, the longeſt time that the *Moon* can be ſeen between Change and Change.

The Political or Civil Months are ſuch as are uſed y all Nations ; they differ much as to their Names, nd Number of Days. I ſhall only take Notice here f the Months that are in uſe in the old, and new Style; ey being the ſame as to their Names and Number of Days ; and the Antient *Hebrew*, or *Jewiſh* Months, for e better underſtanding of them, as they occur, (by Name or Number) in reading of the holy Scripure.

The Firſt, orthe Eleventh Month, 31 Days.

January, from *Janus*, the firſt Heathen King of e *Romans*, whom they Deify'd after his Death ; d built a Temple in which they Worſhip'd him.

The Second, or Twelfth Month, 28, or 29 Days

February, from *Februa*, i. e the expiatory Sacrifices ered up by the Antient *Romans*, for the Purifying the People in this Month.

The Third, or Firſt Month, 31 Days.

March, from *Mars*, call'd God of Battle, or War, the Heathens feigned the Son of *Juno*, and Father *Romulus*, the Founder of *Rome*.

The Fourth, or Second Month, 30 Days.

April, from *Aphroditus*, or *Venus*, feigned Goddeſs Love.

The Fifth, or Third Month, 31 Days.

May, from *Maia*, a Heathen *Roman* Goddeſs; likeſe call'd *Flora*. On the firſt Day was kept the aſt of *Cloris*, *Flora*, which was afterwards Solemized with Flowers and green Boughs, ſtiling that umpet, the Goddeſs of Flowers.

The Sixth, or Fourth Month, 30 Days.

June, from *Juno*, alſo a Heathen Goddeſs, feign'd be Siſter and Wife to *Jupiter*, and Mother of *Mars*.

The Seventh or Fifth Month, 31 Days.

July, ſo called in Honour of *Julius Cæſar*; the firſt Heathen Emperor of the *Romans*.

The Eighth, or Sixth Month, 31 Days.

Auguſt ſo call'd in Honour to *Auguſtus Cæſar*, the ſecond Heathen Emperor of the *Romans*.

In his Days was born the King of Heaven and Earth.

Note, *September*, *October*, *November*, and *December*, ſtill, retain their old *Latin* Names.

Sept. ſignifies the 7th, *Oct.* the 8th, *Nov.* the 9th, and *Dec.* the 10th, Month, reckoning from *March*.

The Ninth, or Seventh Month, 30 Days.

September for *Septem*.

The Tenth, or Eighth Month 31 Days.

October from *Octo*.

The Eleventh, or Ninth Month, 30 Days.

November from *Novem*.

The Twelfth, or Tenth Month, 31 Days.

December from *Decem*.

The Hebrew, *or* Jewiſh *Months.*

1	A*Bib* or *Niſan*	30	Eſth. 3,7. *Exod.* 13,4.
2	*Jiar*, or *Zif*	29	1 *Kings* 6, 1.
3	*Sivan*	30	*Eſth.* 8, 9.
4	*Tamuz*	29	2 *Kings* 25, 3, &c.
5	*Ab*	30	1 *Chron.* 27, 5,8, &c.
6	*Ebul*	29	*Neh.* 6, 15.
7	*Ethanim* or *Tiſri*	30	1 *Kings* 8, 2.
8	*Marcheſuan*, or *Bull*	29	1 *Kings* 6, 38.
9	*Chiſleu*	30	*Neh.* 1,1.
10	*Zebeth*	29	*Eſther* 2, 16.
11	*Sebat*	30	*Zech.* 1,7.
12	*Ader*	29	*Eſth.* 9, 1.

A whole

A whole Lunation, or the Age of a Moon from Change to Change conſiſts of about 29 Days and half. And therefore to avoid this Fraction, the *Hebrews* compos'd their Months alternately of 30, and 29 Days: And when the Difference between this way of reckoning by the Moon, and the true Solar Year (having regard thereunto) Amounted to ſuch a Number of Days, then they added a Month more, which they call *Veader*; and this Month is plac'd before *Ader*, for *Ader* is always the Laſt Month of the Year.

Of the Various ways of Reckoning Day and Night.

A Natural Day, is determined by the Sun's Motion (according to appearance) round the Earth in 24 Hours, tho' in reality, it is the Earth that turns round her own Axis from Weſt to Eaſt, in that Space of Time: And this is the reaſon the celeſtial Bodies ſeem to us to move from Eaſt to Weſt.

The natural Day is alſo called Civil, becauſe diverſly reckoned by divers Nations.

The *Britains* and *Romans* begin the Day at Midnight; the *Jews*, *Egyptians*, *Athenians*, &c. begin the Day at Sun-Setting, which appears to be the true original Beginning from Scripture, *Gen.* 1, 5, 10. the *Turks*, *Babylonians*, &c. begin the Day at Sun-Riſing Aſtronomers begin the Day at Noon.

The Artificial Day is the time between Sun-Riſing and Sun-Setting (oppoſite to which is Night) and differs in Length according to the Sun's Place in the Zodiack and Latitude of the Region.

The Artificial Day, by Aſtronomers is divided, be it long or ſhort, into 12 Planetary Hours: The Length of a Plenetary Hour at *London*, when the Day is at the longeſt it is about 82 min. at the ſhorteſt ſcarce

5 48 min. This Reckoning is ſuppoſed to be in uſe at *Jeruſalem*. See *John* 11--9. alſo *Mat.* 20.

The Seven Days of the Week obſerved as Sabbaths, by

1. CHriſtians, In Commemoration of Chriſt's Reſurrection.
2. *Grecians*, in Remembrance of the ſecond Day's Works of the Creation.
3. *Perſians*, in Commemoration of the third's Day's Works.
4. *Aſſyrians*, in Remembrance of the fourth's Day's Works.
5. *Egyptians*, in Commemoration of the fifth Day's Works.
6. *Turks*, in Remembrance of the Creation of Man.
7. *Jews*, in Commemoration of God's Reſting from all his Works.

Of the Names of the ſeven Days of the Week

	The Chriſtian Names of the Week Days.	*The Jewiſh Names of the Week Days*
Of the Week,	Firſt, or the Lord's Day	Firſt Day of the Week
	The Second Day	The Second Day
	The Third Day	The Third Day
	The Fourth Day	The Fourth Day
	The Fifth Day	The Fifth Day
	The Sixth Day	The Sixth Day
	The Seventh Day	The *Jewiſh* Sabbath

The Names of the ſeven Days of the Week continu'd.

The Heathen Roman's *Names of the Days of the Week*	*The Heathen Saxons Names of the Week Days.*	
Solis	Sun's-Day	1.
Lunæ	Moon's-Day	2.
Martis	Tueſco't-Day	3.
Mercurii	Woden's-Day	4.
Jovis	Thors-Day	5.
Veneris	Friga's-Day	6.
Saturni	Seater's-Day	7.

Chriſtians might thus diſtinguiſh the Days of the Week, and not uſe theſe Heathen Names. See *Ge-ſis* 1. The Heathen *Romans* dedicated the ſeven Days of the Week, to the ſeven Planets, (their Gods and Goddeſſes) and accordingly called them by their Names, as in the the Table above.

The *Saxons* likewiſe call'd the Week-Days after the Names of their Idols ; which Idols alſo repreſented the Planets.

The Jewiſh *Artificial Day divided into.*

Planetary Hours	1 2 3	4 5 6	7 8 9	10 11 12
and great Hours	1	3	6	9
Equal to our	7 8 9	10 11 12	1 2 3	4 5 6

Each of theſe Quarters, or large Hours contain three of the Planetary or ſmall Hours, as appears plainly from this Table.

The firſt Quarter of the Day takes in the firſt, ſecond and third Hours from Sun-Riſing : But to avoid the trouble that attends the Planetary Hour, the *Jews* now-

now-adays begin the Natural Day at ſix a clock in the Evening, and the Artificial at ſix in the Morning. And therefore, their firſt Hour (beginning at ſix) is equal to our ſeventh.

The ſecond Quarter of the Day, which they call the Third Hour, contains 4, 5, 6, equal to 10, 11, 12, &c.

They divide the Night alſo into great Hours, or Watches; each Watch conſiſting of 3 ordinary Hours. The firſt Watch contains, 1, 2, 3, or the three firſt Hours of the Night: The ſecond Watch contains the 4th, 5th and 6th, &c.

Now this double reckoning of Hours occaſions a ſeeming contradiction in ſome Paſſages of the Holy Scripture: St. *Mark* 15, 25. ſays, that our Lord was Crucified the third Hour; St. *John* 19,14, ſays, that Jeſus ſtood before *Pilate* the ſixth Hour: Now, theſe two Paſſages may be thus reconcil'd that the End of the third great Hour (of which St. *Mark* ſpeaks) is equal to the end of the ſixth ſmall Hour, mention'd by St. *John*. And this is farther proved from Verſe 33, where St. *Mark* agrees with the other Evangeliſts concerning the time that the Darkneſs began and ended: It began when our Lord condeſcended to be Nailed to the Croſs, at the ſixth Hour, equal to our 12th, and ended at Nine, or at Three in the Afternoon.

That this Eclipſe of the Sun was ſupernatural, and not cauſed by the Interpoſition of the Moon between him and the Earth, is proved from the Poſition of the Lummaries at that time.

It is agreed that Chriſt ſuffer'd the 33d Year of his Age; and conſequently on the 3d of *April*, *Friday*, or the Day before the Feaſt of the Paſſover; on which very Day the Moon was at Full, which made *Dionyſius* the *Areopagite* break out into this Exclamation; *Either the God of Nature ſuffers, or the Machine of the World diſſolves*; not knowing how Prophetical he ſpoke; but afterwards he was converted by Saint *Paul's* Preaching

eaching, and was then perſwaded that it was the d of Nature that did really ſuffer at that time. Chriſt ving taken upon him the Puniſhment that was due us for our breach of the Divine Commands, d the Father, therefore withdrew the Light of his untenance from him, (for a time) and alſo the ght of the Sun ! We deſerved to ſuffer in Eternal kneſs ; But our gracious Redeemer, to reſcue us m the Divine Juſtice, takes our place, and ſuffer'd in kneſs for us.

Let us not therefore ſlight this matchleſs Inſtance our Saviour's Love, and *neglect ſo great Salvation ! let us be faithful unto the end, to him that thus loved and waſhed us from our Sins in his own Blood.*

A Brief Diſcription of all kind of Meteors.

Firſt, of CLOUDS.

LOUDS, are a *Congeries*, or Heap, (chiefly) of Watery Particles drawn, or ſent out of the h and Seas in Vapours; and ſupended (being light ody) in the ſecond Region of the Air, till they are diſolved, either by Heat, or broken by the nt Agitation of Winds, or driven againſt the ſides Hills and Mountains, &c.

louds and Vapours are the Parents of Rain, Hail Snow; and Rain, and Water (to which Hail Snow turn) are the Parents of Clouds and Vas; therefore, ſince they beget each other, and f the ſame Element and Subſtance, very little be ſaid of them ſeparately ; only, a Word or ouching the ſeveral ſhapes and dreſſes in which appear to us.

RAIN

RAIN, is nothing but a Cloud diſſolved either by Heat, or broken by Winds, as above ſaid.

Here it may be obſerved the great diſtance of the Cloud from the Earth, the ſmall Heat that diſſolves it, cauſes ſmall Drops; but if it be deſolved by great Heat, or elſe be at ſmall diſtance from the Earth, then are the Drops of Rain the greater, and more Vehement.

SNOW, is a Cloud, firſt Diſſolved into Drops, and in its Deſcent to the Earth meeting with a ſoft freezing Wind, or at leaſt paſſing thro' a colder Region of the Air, each Drop is immediately frozen into an Icicle, ſhooting it ſelf forth into ſeveral Points; and in their continual Motion and wavering to and fro, touching upon each other; or meeting (with) ſome ſprinkling and intermixing Gales of Warmer Air, &c. ſome are a little thaw'd, blunted, frothed, chumper'd; others broken; but the moſt hanked and clung in ſeveral Parcels together, we call Flakes of Snow, &c.

The true Cauſe of the Congelation of Water into Ice, ſeems plainly to be the Introduction of the Frigorifick Particles into the Pores or Interſtices between the Particles of the Water; and by that means, getting ſo near to them, as to be juſt within the Sphere of one another's Attracting Force, and then they muſt cohere into one ſolid or firm Body. But Heat afterwards ſeparating them, and putting them into various Motions, break this Union, and place the Particles ſo far from one another, as to be out of the diſtance of Attraction, and brought into the Verge of Repelling Force, and then the Water re-aſſumes its fluid Form.

HAIL cometh of Rain congelated into Ice, (Or as Dr. *Fulk* obſerves) it is a hot Vapour in the middle Region of the Air, and by the Coldneſs thereof it is conondenſed into a Cloud; which falling down, is by he ſudden cold of the Loweſt Region congealed into Hail.

The moſt uſual times of the Year for Hail are *pril* and *October*; becauſe then there wants neither ot Vapours to reſiſt the cold, nor ſufficient Cold to arden the Drops of Rain from whence it proceeds; hereas in Winter there wants hot Vapours, and in ummer 'tis too hot to congeal the Drops of Rain as ey fall down.

DEW is compoſed of Streams of the Terreſtrial lobe, which for a while ſwim to and fro in the Air, t at laſt convene into Drops, and then fall down a- ain to the Earth.

HEAT, one of the Four primary Qualities of odies, and (according to the new Philoſophy) chiefly nſiſts in the Rapidity of Motion, in the ſmaller arts of Bodies, and that every way: Or in the Parts ing rapidly agitated all ways. It's Operation upon e Senſes we call Heat, and is Eſtimated according its Relation to the Organs of Feeling; for we do t eſteem any Body to be hot, unleſs the Motion of ſmall Parts be violent, or brisk enough to encreaſe, ſurpaſs that of the Particles, of the Organ: For if be more week or Languid in the Object than in e Sentient, we ſay, the Body is cold, *&c.*

COLD, alſo one of the Four Primirary Qualities of dies; and is ſuch a ſtate of the minute Parts of any dy, in which they are more ſlowly or faintly a- ated, than thoſe of the Organs of Feeling; ſo t it is only a Relative Term, the ſame Body being ble to be pronounced hot or cold, as its Particles are a greater or leſſer Motion than thoſe of the Sen- ry Organs. Little need be ſaid of *Cold*, for e- y Body has it ready enough at their Fingers ends.

The RAIN-BOW, or *Iris*, is the Sun's Imag reflected from the concave Surface of an Innumerab Quantity of ſmall ſpherical Drops of falling Rai &c.

Authors differ concerning the Original of this ſu prizing *Bow*.

Naturaliſts affirm that the *Rainbow* appear'd b fore the Flood, (as being produced by a natu Cauſe) as well as ſince. But they ought to conſid that the great Creator of all things, Viſible and Inviſib who ſits at the Helm of the Univerſe, may cauſe Natu to produce Signs and Wonders, when, and how He pl ſes, without any Neceſſity of a new Creation. And th the *Rainbow* was ſeen before the Flood, (as now) very impropable; That a God of an Infinite a Boundleſs Power, ſhould give as a Token or Sign of Conſolation, to *Noah*, after his Melancholy Voyage Meteor that was commonly ſeen before.

But when we look upon it as then exhibited, a Eſtabliſhed by Almighty Power, as a perpetual ſign of God's Covenant with *Noah* and his Poſterity, that t World ſhould be no more drowned; I ſay, we m then look upon it as a grand, and Beautiful Tok worthy of a God to give, to Engage the Admirati and Love of his People, and their Faith to rely up his Promiſes. *Gen.* 9, 11, to 18.

Of THUNDER *and* LIGHTENING.

The *Phænomena* of this very common, but often ti dreadful Meteor, are thus accounted for and ſolv by Dr. *Hook*. The Atmoſphere about the Earth abounds with Nitrous Particles of a ſpirituous Nature, which are every where carried along with i; beſides which ſort of Particles, there are alſo oth raiſed up into the Air, which may be ſomewhat of Nat[illegible] of ſulphureous, unctuous, or other combuſti F[illegible]: [illegible] that it is an Exhalation hot and dry, wh

be

eing drawn up into the middle Region of the Air, nd incloſed in the Body of a thick cold Cloud, (ſo hat the Hotneſs of the Exhalation cannot agree with e Coldneſs of the Place) it ſuddenly breaketh out, and nteth the Cloud aſſunder. This Violent Eruption akes a great Noiſe, which we call *Thunder*. The Cloud ing thus broken and diſſolved by the Heat of the xhalation, it falls downward; then follows (moſt mmonly) a Shower of Rain. Hence at the Rent of Cloud there always iſſues forth a Flaſh of Fire, ich we call *Lightening*; and that always precedes Thunder-Clap; becauſe our Sight is much quicker n our Hearing: For Light comes to us from the n in 7 minutes of time; whereas Sound (according Sir *Iſaac Newton*'s Law of the Motion of Sound) ves but 77 Miles in 7 Minutes.

A Thunder-bolt is a moſt rapid Flame which ts out of the Cloud (when the Exhalation is ſet on) to the Ground, and ſtrikes thro' every thing in way.

arthquakes are often occaſioned (as Mr. *Boyle* ks) by the ſudden Fall of pondrous Maſſes in the llow Parts of the Earth, whereby thoſe terrible cks and Shakings are produced: And ſometimes the Violent Eruption of the Windy Exhalation of the Earth, it caſteth up the Earth into the Air; at other times it cauſes it to ſink a great depth, lowing up whole Cities! leaving (ſometimes) urage in the place of Tillage, and Tillage in the of Paſturage.

I.

t God, who governs Nature's Laws,
ſtill the fundamental Cauſe.
hen we neglect, and ſlight his Love,
e hear his Threatning Voice above.

His ſounding Chariot ſhakes the Skies,
And th' Earth beneath him trembling lies!
He rends the Clouds, he tears the Air,
His Thund'ring Voice ſtrikes Awe and Fear.

II.

Now, Fire and Lightning flyes abroad,
The threatning Judgments of our God!
The Earth's Foundations reel, and ſhake,
The ſtaggering Hills thus frighted, quake!
And yet the hard'ned Sinner ſtands,
And ſtill abuſe the Lord's Commands!
He fears not him that ſhakes the Hills,
Nor yet his Pow'r who ſaves and kills.

III.

Till laſt in one Eternal Storm,
The God of Thunder ſmite the Worm!
And then in Flames he muſt confeſs,
God's Juſtice and his Right'ouſneſs;
If Love and Threatning will not do,
God's Vengeance then muſt needs enſue.

AIR, one of the Four Elements, wherein we breathe, and in which the Earth is ballanced by the Great Architect of the Univerſe.

Without Air, no Creature can live one Minute: For the Breath we draw, is Air. The Blood cannot circulate in our Veins without it. It gives Motion and Pregnancy to the other Elements. Fire would ſoon extinguiſh, Water would putrify, and the fruitful Pores of the Earth would quickly cloſe up without Air.

WIND

WIND is defined to be a Stream, or Current of the Air; and Conſtant, Variable, Cold or Hot, according to the Latitude and Situation of the Region, Nature of the Soil, and Seaſons of the Year, *&c.*

AURORA BOREALIS, or the Northern Lights, vulgarly called *Streamers*, or *Merry Dancers*; becauſe they mix and ſhuffle, like a Set of Country-Dancers, or like the Streamers of a great Fleet on the Main in a windy Day.

Strange are the Conjectures of the Unlearned concerning this Appearance in the Heavens: Some imagine, they ſee Armies of Men, Horſes and Chariots fighting in the Air! which they take to be ſure Preſages of War, *&c.*

But the real Cauſe is Natural, and proceeds from the Sun's having rarefy'd the lower Region of the Air in the Day-time, doth in the Night (a little after Sun-ſet) raiſe thoſe light Particles of Matter into the more Ætherial Region, and cauſes them to be ſeen there as ſo many Streams, or Pyramidal Glades of Light, darting themſelves (generally) towards the oppoſite Parts of the Heaven, where the Sun is at that time.

IGNIS FATUUS, or *Fooliſh Fire*, ſo called, becauſe it makes People oftentimes wander out of their Way, who take it for a real and ſubſtantial Fire; but when they find they are deceived, they are apt to call it a Fooliſh Fire, or themſelves Fools for following it. It is alſo called *Will with a Wiſp*, or *Jack with a Lanthorn*, appearing chiefly in Summer-Nights, haunting, moſt commonly, Church-Yards, Meadows and Boggs. It conſiſts of a viſcous Subſtance, or fat Exhalation, which, being kindled in the Air, reflects a kind of thin Flame, yet without any ſenſible Heat.

Shooting Stars are improperly called *Stars*, becauſe they are but ſmall Exhalations in the Air: That Subſtance (which we ſee on the Ground in the Morning) is like Jelly.

Natural Prognoſticks of the Weather.

Scripture-Obſervations of the Weather.

SOUTH Wind, or Heat (in Summer) foreſhews Whirlwind, *Job* 37, 9. Cold, or Fair Weather, is foreſhewn by the North Wind, *Job* 37. 9, 22. for that driveth away Rain. A red Sky in the Evening foreſhews fair Weather; in the Morning, foul, *Matt.* 16, 2. A Cloud riſing out of the Weſt, foreſhews Rain, *Luke* 12. 54. South Wind foreſhews Heat, *Verſe* 54.

This was on the Main Continent.

Signs of Fair Weather.

1. The Sun riſing bright and clear.
2. If he drive the Clouds before him into the Weſt.
3. If at his Riſing, a Circle appears about him, and by degrees vaniſhes away.
4. If the Sun ſets red.
5. If the Moon be clear three Days after the Change, or three Days before the Full.
6. Clouds appearing with Edges, yellow.
7. A Cloudy Sky, clearing againſt the Wind.
8. The Rainbow, after Rain appearing meanly red.
9. Miſts coming down from the Hills, and ſetling in the Valleys; or Miſts in the Evening, ſhew a hot Day on the Morrow; likewiſe white Miſts riſing from Waters in the Evening.

10. Crows and Ravens gaping againſt the Sun.

11. Beetles flying in the Evening.

12. Bats flying about ſooner than ordinarily they do.

13. Many Flies or Gnats playing in the Sunſhine at Evening.

14. The Wincopipe, a ſmall red Flower, which, if it be open in the Morning, you may be ſure of a fair Day to follow.

Signs of Rain.

1. If the Sun be fiery red at his Riſing.

2. If he ſhew pale and wan.

3. If red and black Clouds be about him at his Riſing, in which he is ſoon after hid.

4. If his Rays look dark or blue.

5. If a Cloud appear, to which, Vapours are ſeen to aſcend.

6. When the Moon Changes near the *Pleades*.

7. A Circle called *Halo*, about the Moon.

8. If the Sun ſeems greater in the Eaſt than commonly it doth.

9. If a black Cloud appears in the Weſt at Sunſet, it will rain that Night, or the Day after.

10. If the Sun or Moon look pale, expect Rain; f fair and bright, fair Weather.

11. If the great Stars be only ſeen, and look im.

12. The Rainbow appearing very green the more ain.

13. Birds waſhing themſelves.

14. The chattering of the Mag-pye.

15. Peacocks and Ducks often crying.

16. Swallows flying low.

17. The Owl crying *Chiwit* often

18. The Working of the Spinner.

19. Water-Fowls (as Sea-Gulls, More-hens, &c.) ock together, and fly from the Sea; and contrariwiſe, hen Land-Birds fly to the Waters (ſuch as Crows, Swal-

Swallows, *&c.*) and beat the Water with their Wings.

20. Many Worms appearing above the Earth.

21. The wallowing of Dogs.

22. Beaſts eating greedily, and licking their Hoofs.

23. The biting of Fleas, Gnats, *&c.*

24. Soot falling much from Chimneys.

25. The ſweating of Stones, VVainſcot, and other ſolid Bodies.

26. A Circle round a Candle.

27. Hurts, Aches Corns, and the Limbs of antient People do alſo foreſhew the approach of Rain or Froſt: for then they grieve them more than uſual.

28. No Dew Morning nor Evening.

29. Bells heard farther than uſual.

30. Barn-door Fowls and Gipſies picking themſelves, as if they were louſy, or had the Itch, is a ſure Sign of Rain.

Signs of Wind.

1. Red Clouds appearing in the Morning.

2. Much ſhooting of the Stars.

3. Rainbow red.

4. Black Circles, with Streaks about the Sun and Moon.

5. Stars dim and fiery.

6. Autumn fair, a windy Winter.

7. Clouds flying ſwift in the Air.

8. Fire burning pale, or huzzing.

9. Ravens clapping their Wings.

10. The high flying of the Raven.

11. Crying of Swine.

12. The Reſounding of the Sea upon the Shore, and Murmuring of Winds in Woods and Caves, (without apparent Wind) ſhew Wind to follow: For ſuch Wnids breathing chiefly out of the Earth, are not preſently perceived, except they be pent by Wood or Water, *&c.*

Re-

emarkable Paſſages of Time ſince the Creation, to the preſent Year 1734, *according to the* Julian *Account.*

ote, That the firſt column ſignifies the Year of the World ; the ſecond, the Year before Chriſt.

THE Creation of the World,	0000	3947
The World drowned *Gen.* 7, 6.	1656	2291
he Building of *Babel* (*Nimrod* the Ringleader, King of *Aſſyria* ſup-poſed to be the firſt King on Earth) *Gen.* 11, v. 45.	1787	2160
eathen Gods began,	2006	1941
omorrah deſtroy'd *Gen.* 17, 10,	2047	1900
braham offers *Iſaac*, Gen. 22	2064	1883
raelites depart out of *Ægypt*, *Exod.* 12.	2453	1494
he Kingdom of *Troy* began by *Dardanus*,	2471	1476
he Deſtruction of *Troy*,	2767	1180
ndon Built,	2843	1104
aul, the 1ſt King of Iſrael anointed,	2879	1068
he Temple of *Jeruſalem* finiſh'd.	2939	1008
rk built,	2961	986
ome built by *Romulus*,	3197	750
he Monarchy of *Aſſyria* ends,	3110	837
he Monarchy of *Perſia* began by *Cyrus*,	3387	560
he *Perſian* Monarchy ends, nd the *Grecian* Monarchy begins,	3615	332
he old Teſtament tranſlated into Greek by the 70 Interpreters,	3722	225
he *Romans* conquer'd *England*,	3902	45
lius Cæſar corrected the Kalender,	3903	44
he King of Kings began his Endleſs Reign,	3947	

Remarkable Paſſages of Time continued.

Note, The firſt Column ſhews the Year of Chriſt; the ſecond Column, Years ſince.

SInce the Union of God and Man!	0	1733
The Bleſſed Virgin died,	45	1688
The *Britons* embraced the Chriſtian Religion,	83	1650
Conſtantine the Great aſſembled a Council of 318 Biſhops at *Nice*, which condemned *Arius*,	325	1408
The coming of the *Saxons* into *Britain*,	447	1286
Singing of Pſalms brought into the Church by *Damaſus*,	383	1350
England divided into Seven Kingdoms,	527	1206
Bells firſt ordained to aſſemble People together,	603	1130
The coming of *Mahomet* the *Turk*,	622	1111
Lent, firſt ſet up in *England*,	640	1093
Organs brought into the Church,	657	1076
The Danes invaded *England*,	873	860
A Terrible Earthquake in *Britain*,	1048	685
Tranſubſtantiation brought into the Church by the Council of *Lateran*	1059	674
The firſt Parliament of Nobility, Clergy and Commons,	1116	617
Ireland reduced to *England* by *Henry* 2.	1177	556
Henry Fitz *Alwin*, Firſt Mayor of *London*	1190	543
A great Dearth for Three or Four Years together, Wheat then ſold for a Mark the Quarter, which before was but 12 Pence,	1204	529
London Bridge finiſhed with Stone,	1209	524

Another great Dearth; that many eat Dogs and Horſes,	1315	418
Guns invented,	1378	355
Martin Luther, that great Reformer, born,	1483	250
Printing firſt in *Britain* by *Will. Caxton*,	1471	262
America Firſt diſcover'd, by *Chr. Columbus*,	1492	241
The Pſalms turned into Meter by *Sternbold*,	1552	181
The Terrible Maſſacre in *France*,	1572	161
A general Earthquake,	1580	153
The Powder Plot,	1605	128
The Bible new tranſlated,	1611	122
The Terrible Maſſacre in *Ireland*,	1642	91
Edge-Hill Fight,	1642	91
Newbury-Fight,	1644	89
Quakeriſm began, by *George Fox*,		83
The Blazing Comet ſeen *December*,	1680	53
A great Plague in *London*, whereof died 100000.	1665	68
A dreadful Fire, which burnt 87 Pariſhes in *London*,	1666	67
A Froſt for 13 Weeks,	1684	49
The Battle of the *Boyne*,	1690	43
The high Wind in *November*,	1703	30
Blenheim-Fight,	1704	39
The Union of *Scotland* and *England*,	1707	26

A General View of the Four Parts of the World; and firſt, of EUROPE.

EUrope is ſeated between 34 and 72 Degrees of North Latitude, from the North Cape to Cape *Metapan* in the *Moran*, equal to 2641 Miles; and from Cape St. *Vincent* in the Weſt, to the Mouth of the River *Oby* in the Eaſt. It contains 82° of Longitude, which are 5699 *Engliſh* Miles.

The principal Diviſion of the Continent of Europe.

Germany.
Moſcovia *or* Ruſſia.
Scandinavia *comprehends*
Swedeland. }
Norway. }
Denmark.
France.
Italy.
Spain.
Poland.
Pruſſia.
Turkey *in* Europe.
Netherlands.
Greece.
Tranſilvania.
Hungary.

The moſt noted Iſlands on the Coaſts of Europe.

Great Britain.
Ireland.
Iſle *of* Man.
Sicily.
Guernſey, Jerſey,
Sardinia.
Majorca, Minorca.
Azores.
Langeland.
Laland.
Iceland.
Gothland-*Iſle.*
Cephalogna.
Candia.
Negropont, *and* Greenland *depending on* Norway.

Of

Of ASIA.

ASIA, is ſituated on the Eaſt of *Europe* ; It contains 130° of Longitude, equal to 9035 *Engliſh* Miles. In its Latitude it poſſeſſes all the Temperate, the greateſt part of the Torrid, and part of the Frigid Zones ; ſo that it enjoys the whole 24 Climates ; and its longeſt Days are from 12 to 24, Miles 7645.

The Continent of Aſia.

Aſia Minor.
Syria.
Paleſtine.
Arabia.
Aſſyria.
Chaldea.
Meſopotamia.
Turcomania *or* Armenia major.
Georgia.
Mengrelia.
Perſia.
Maguliſtan *or* Indoſtan.
Turkey *in* Aſia.
Eaſt Indies.
China.
Tartary.
Paradiſe.
Judea, *&c.*

The principal Iſland on the Coaſt of Aſia.

Cyprus.
Rhodes
Lesboes *or* Meteline.
Chios *or* Scio.
Samos.
Coos *or* Lango.
Ceylon.
The Maldive *Iſlands.*
The Sunda *Iſlands.*
Sumatra, Java.
Borneo.
The ſpice Iſlands.
Molucca-Iſlands.
Banda, Ternate.
Amboyna, Ceram.
Gilolo.
The Philippine-Iſlands.
Japoneſe-Iſland.
The Ladroneſs *Iſlands.*

Of

Of AFRICA.

AFrica lies South of *Europe*, Weſt of *Aſia*, extending in Longitude 75 Degrees from Eaſt to Weſt, 5212 Miles. Its Latitude is from 36 Degrees North, to 35 South, in all 71, Miles 4934.

The Continent of Africa.

Barbary.
Egypt.
Bilidulgerid.
Saara.
Negro-land.
Guinea.
Nubia.
Abiſſynia.
Zanguebar.
Congo.
Monotapa.
The Land of the Cafres.
Ethiopia.
Morocco.
Tripoli.
Zanfara.
Teſſet.
Zanhaga.
Zaara, *or the Deſart.*

Iſlands round the Coaſt of Africa.

Madera.
Canaries.
Cabo Verde.
St. Thomas.
St. Helena.
Madagaſcar.
Zocolora.
Fernand-po.
Princeſs Iſland
St. Mathew.
Malta.
The Iſland of Aſcenſion.

Teneriff *is one of the Canary-Iſles and the Peak of it is by ſome reckoned the higheſt Land in the World, the Aſcent of it is 15 Miles, and the Perpendicular ſuppoſed to be 5 Miles.*

Of AMERICA.

THis Part of the World was diſcover'd in the Year 1492 by *Chriſtopher Columbus*, *a Genoeſe*, Imploy'd by *Ferdinand*, King of *Spain*. The Extent of what has been diſcovered of this Tract of Land, is from 55 Degrees of South Lat. to 80 Degrees of North Lat. equal to 9382 *Engliſh* Miles; and in Longitude 99 Degrees, which gives 6380 *Engliſh* Miles. The *Iſthmus* parting South and North *America*, is 139 Miles over.

Continent.

Eſquimaux.
Canada.
Berſiamites.
Sagnenay.
Louiſiana.
Iroguois.
Etechemins.
Acadia.
Subject to France.

New England.
New York.
New E. Jerſey.
New W. Jerſey.
Penſylvania.
Maryland.
Virginia.
Carolina, Georgia.
Subject to Britain.

Florida.
Groenland.
New Britain.
New Wales.
Not all conquer'd.

Mexico.
Guatimala.
Terra firma *or* Main Land.

Continent.

Peru, &c.
Paragua *or* Rio de la Plata.
Spaniſh Dominions.

Braſil *belonging to* Portugal.
Caribana *not conquer'd.*

ISLANDS.

Newfoundland.
California.
Cuba.
Jamaica.
Hiſpaniola.
Caribees.
Sotovento.
Bermudas *or Summer*-Iſles.
Puerto rico.
Barbadoes.
Lucayo Iſlands.

There are beſides theſe principal Iſlands about 100 of leſs Note.

A Table *ſhewing the Length of the longeſt Artificial Day from One Degree of Latitude to Nmety.*

Lat Deg	*Hour*	*Min.*	*Lat Deg*	*Hour*	*Min.*	*Lat Deg*	*Hour*	*Min.*
1	12	3	31	14	1	61	18	53
2	12	6	32	14	6	52	19	19
3	12	10	33	14	11	63	19	49
4	12	14	34	14	16	64	20	24
5	12	17	35	14	22	65	21	10
6	12	20	36	14	27	66	22	20
							Days	Hour
7	12	24	37	14	33	67	24	1
8	12	28	38	14	38	68	42	1
9	12	32	39	14	44	69	54	16
10	12	35	40	14	51	70	64	13
11	12	39	41	14	58	71	74	0
12	12	43	42	15	4	72	82	6
13	12	46	43	15	11	73	89	4
14	12	50	44	15	18	74	96	17
15	12	53	45	15	26	75	104	1
16	12	57	46	15	34	76	110	7
17	13	1	47	15	42	77	116	14
18	13	4	48	15	51	78	122	17
19	13	8	49	16	0	79	127	9
20	13	12	50	16	10	80	134	4
21	13	16	51	16	20	81	139	13
22	13	20	52	16	30	82	145	6
23	13	25	53	16	42	83	151	2
24	13	29	54	16	54	84	156	3
25	13	33	55	17	8	85	161	5
26	13	38	56	17	22	86	166	11
27	13	42	57	17	36	87	171	21
28	13	46	58	17	52	88	176	5
29	13	51	59	18	10	89	181	21
30	13	56	60	18	30	90	187	6

Againſt 66 Degrees you have 22 Hours, 20 Minutes, the Length of the longeſt Day; againſt 67 Degrees you have 24 ordinary Days, 1 Hour, the Length of the longeſt Day in that Latitude; and the Length of the longeſt Day under the South Pole is 177 Days, 23 Hours.

The Explanation of the two following Tables, *Firſt, of the* Tyde-Table.

IN the firſt two ſmall Columns on the left Hand, you have the Moon's Age from 1, to 30: In the next Column, under *Portſmonth, Queenborough,* &c. you have the Time of the Moon's Southing every Day of her Age.

Example. I demand the time of High Water the firſt Day of the Moon's Age at *Portſmouth, Aberdeen, Graveſend, Dundee,* &c. It's High at *Portſmonth* 48 Minutes paſt 12 at Noon; the 16th Day (which is in the ſame Line.) It's High 48 Minutes paſt 12 at Night. At *Aberdeen* 33 Minutes after 1; at *Graveſend* 18 Minutes after 2; at *Dundee,* 3 Minutes after 3.

The Moon Souths the 15th Day of her Age, at 12 a-clock at Night, the 30th Day of her Age (or rather the Day that the Moon Changes. She comes to the South at 12 at Noon: It is then High.)

At *Portſmouth* and theſe other places, in that Column; at *Aberdeen,* 45 Minutes after 12, &c.

The firſt Day of the Moon's Age it's high Water at *London*-Bridge 48 Minutes after 3 in the Afternoon, the 16th Day of her Age, 48 min. after 3 in the Morning; at *Berwick,* 33 Min. after 4, and ſo thro'.

It is always High in the main Ocean when the Moon comes to the South.

When the Moon is at Full (having then moſt Influence) the Sea flows Higher than ordinary, which we call *Spring-Tydes*; it is again Spring Tydes when the Moon Changes; her Attractive Quality being then aſſiſted by the Sun.

Of the Table of Expence.

ONE Farthing a Day is 1 Peny 3 Farthings a Week, 7 Pence by the Month or 4 Weeks; by the equal Month, or 12th Part of the Year, 7 Pence 2 Farthings; by the Year 7*s.* 7 *d.* 1 [illegible].

One Shilling a Day is 18 *l.* 5 *s.* by the Year; in Leap-Year, 6 *s.*

To find the Moon's Age any Day of the Month.

SUbtract the Day of New Moon from the Day propos'd, the Remainder is the Moon's Age.

For Example. The Moon Changes the 23*d* Day of *Jan.* 1734 ; I wou'd know the Moon's Age the 31*ſt* of the ſame Month ?

I ſubtract 23 from 31, and there remains 8, the Moon's Age required.

But when you wou'd know the Moon's Age in the following Month before the next New Moon, you muſt add the Day propoſed to the remainder here.

Example 2. I wou'd know the Moon's Age the 17th of *Feb.* in the Year above-mention'd ? Now I add 17 to 8, the Moon's Age, the laſt Day of the foregoing Month, which makes 25, the Moon's Age the 17th of *February.*

Example 3. I wou'd alſo know the Moon's Age the 22d Day of the ſame Month, *Feb.* To find which, I add 22 to 8 the Moon's Age, the laſt Day of *Jan.* the Sum is 30 ; by which I find the Moon to be in the 30th Day of her Age, on which Day ſhe comes always to a Conjunction with the Sun.

Seek for the Day of New Moon in the Tables for that purpoſe. See Page 63, &c.

A Table *ſhewing the Hour and Minute of High Water any Day of the Moon's Age at theſe Places.*

The Moon's Age.		*Portſmouth* *Queenborough* *Southampton* *Spithead*		*Aberdeen* *Rocheſter* *Malden* *Redband*		*Graveſend* *Downs* *Ramney* *Blackneſ*		*Dundee* *St. Andrew's* *Lisbon* *Leith.*	
		H.	M.	H.	M.	H	M.	H.	M.
1	16	12	48	1	23	2	18	3	3
2	17	1	36	2	21	3	6	4	51
3	18	2	24	3	9	3	54	4	39
4	19	3	12	3	57	4	42	5	27
5	20	4	00	4	45	5	30	6	15
6	21	4	48	5	33	6	18	7	3
7	22	5	36	6	21	7	6	7	51
8	23	6	24	7	9	7	54	8	39
9	24	7	12	7	57	8	42	9	27
10	25	8	00	8	45	9	30	10	15
11	26	8	48	9	33	10	18	11	3
12	27	9	36	10	21	11	6	11	51
13	28	10	24	11	9	11	54	12	39
14	29	11	12	11	57	12	42	1	27
15	30	12	00	12	45	1	30	2	15

The Moon's Age.		*London* *Tinmouth* *Amſterdam* *Gallicia.*		*Berwick* *Flambro' Hd.* *Bridlington B* *Bourdeaux*		*Scarb. Q. Tide* *Lawrenes* *Severn* *Cork-Haven*		*Newcaſtle* *Humber* *Falmouth* *Dartmouth.*	
		H.	M.	H.	M	H.	M.	H.	M.
1	16	3	48	4	33	5	18	6	3
2	17	4	36	5	21	6	6	6	51
3	18	5	24	6	9	6	54	7	39
4	19	6	12	6	57	7	42	8	27
5	20	7	00	7	45	8	30	9	15
6	21	7	48	8	33	9	18	10	3
7	22	8	36	9	21	10	6	10	51
8	23	9	24	10	9	10	54	11	39
9	24	10	12	10	57	11	42	12	27
10	25	11	00	11	45	12	30	1	15
11	26	11	48	12	33	1	18	2	3
12	27	12	36	1	21	2	6	2	51
13	28	1	24	2	9	2	54	3	39
14	29	2	12	2	57	3	42	4	27
15	30	3	00	3	45	4	30	5	15

The Tide-Table *continued.*

The Moon's Age.		*Plymouth Weymouth Hull, Lynn DavidsHead Antwerp.*		*Briſtol Foulneſs Hart-Point.*		*Milford-Hav Bridgwater Lands End Abermorick.*		*Dublin Portland The Hague Lam Bay.*	
		H.	M.	H.	M.	H.	M.	H.	M.
1	16	6	48	7	33	8	18	9	3
2	17	7	36	8	21	9	6	9	51
3	18	8	24	9	9	9	54	10	39
4	19	9	12	9	57	10	42	11	27
5	20	10	00	10	45	11	30	12	15
6	21	10	48	11	33	12	18	1	3
7	22	11	36	12	21	1	6	1	51
8	23	12	24	1	9	1	54	2	39
9	24	1	12	1	57	2	42	3	27
10	25	2	00	2	45	3	30	4	15
11	26	2	48	3	33	4	18	5	3
12	27	3	36	4	21	5	6	5	51
13	28	4	24	5	9	5	54	6	39
14	29	5	12	5	57	6	42	7	27
15	30	6	00	6	45	7	30	8	15

The Moon's Age.		*Catneſs. Orkney Pool, S. Helen Fair Iſles.*		*Needles Layſto Nor. & South Forelands.*		*Yarmouth Dover Harwich Carliſle*		*Rye Goree Thames Winchelſea*	
		H.	M.	H.	M.	H.	M.	H.	M.
1	16	9	48	10	33	11	18	12	3
2	17	10	36	11	21	12	6	12	51
3	18	11	24	12	9	12	54	1	39
4	19	12	12	12	57	1	42	2	27
5	20	1	00	1	45	2	30	3	15
6	21	1	48	2	33	3	18	4	3
7	22	2	36	3	21	4	6	4	51
8	23	3	24	4	9	4	54	5	39
9	24	4	12	4	57	5	42	6	27
10	25	5	00	5	45	6	30	7	15
11	26	5	48	6	33	7	18	8	3
12	27	6	36	7	21	8	6	8	51
13	28	7	24	8	9	8	54	9	39
14	29	8	12	8	57	9	42	10	27
15	30	9	00	9	45	10	30	11	15

A Table *of Expence.*

	By the Day.	*By the Week.*			*By Month, or 28 Days*			*By the 12th Part of a Year.*				*By the Year.*			
Farthings		*s*	*d*	*f.*	*s*	*d.*	*f*	*s.*	*d.*	*f.*		*l.*	*s.*	*d.*	*f.*
	1	0	1	3	0	7	00	0	7	2		0	7	7	1
	2	0	3	2	1	2	00	1	3	0		0	15	2	2
	3	0	5	1	1	9	00	1	10	3		1	2	9	3
Pence		*l.*	*s.*	*d.*	*l.*	*s.*	*d.*	*l.*	*s.*	*d.*	*f.*	*l.*	*s.*	*d.*	
	1	0	0	7	0	2	4	0	2	6	1	1	10	05	
	2	0	1	2	0	4	8	0	5	0	3	3	00	10	
	3	0	1	9	0	7	0	0	7	7	1	4	11	03	
	4	0	2	4	0	9	4	0	10	1	2	6	01	08	
	5	0	2	11	0	11	8	0	12	8	0	7	12	01	
	6	0	3	6	0	14	0	0	15	2	2	9	02	06	
	7	0	4	1	0	16	4	0	17	8	3	10	12	11	
	8	0	4	8	0	18	8	1	0	1	3	12	03	05	
	9	0	5	3	1	1	0	1	2	9	3	13	13	09	
	10	0	5	10	1	3	4	1	5	4	0	15	04	02	
	11	0	6	5	1	5	8	1	7	10	2	16	14	07	
Shillings	1	0	7	0	1	8	0	1	10	5	0	18	05	0	
	2	0	14	0	2	16	0	3	0	10	0	36	10	0	
	3	1	1	0	4	4	0	4	11	3	0	54	15	0	
	4	1	8	0	5	12	0	6	1	8	0	73	00	0	
	5	1	15	0	7	0	0	7	12	1	0	91	05	0	
	6	2	2	0	8	8	0	9	2	6	0	109	10	0	
	7	2	9	0	9	16	0	10	8	3	0	127	15	0	
	8	2	16	0	11	4	0	12	3	6	0	146	00	0	
	9	3	3	0	12	12	0	13	8	5	0	164	05	0	
	10	3	10	0	14	0	0	15	4	2	0	182	10	0	
	11	3	17	0	15	8	0	16	9	3	0	200	15	0	
	12	4	4	0	16	16	0	18	8	5	0	219	00	0	
	13	4	11	0	18	4	0	19	15	5	0	237	05	0	
	14	4	18	0	19	12	0	21	6	10	0	255	10	0	
	15	5	5	0	21	0	0	22	6	3	0	273	15	0	
	16	5	12	0	22	8	0	24	6	8	0	292	00	0	
	17	5	19	0	23	16	0	25	6	3	0	310	05	0	
	18	6	6	0	25	4	0	27	7	6	0	328	10	0	
	19	6	13	0	26	12	0	28	7	11	0	346	15	0	
	20	7	0	0	28	0	0	30	8	4	0	365	00	0	

The Tide-Table *continued.*

The Moon's Age.		*Plymouth* *Weymouth* *Hull, Lynn* *Davids Head* *Antwerp.* H.	M.	*Briſtol* *Foulneſs* *Hart-Point.* H.	M.	*Milford-Hav* *Bridgwater* *Lands End* *Abermorick.* H.	M.	*Dublin* *Portland* *The Hague* *Lam Bay.* H.	M.
1	16	6	48	7	33	8	18	9	3
2	17	7	36	8	21	9	6	9	51
3	18	8	24	9	9	9	54	10	39
4	19	9	12	9	57	10	42	11	27
5	20	10	00	10	45	11	30	12	15
6	21	10	48	11	33	12	18	1	3
7	22	11	36	12	21	1	6	1	51
8	23	12	24	1	9	1	54	2	39
9	24	1	12	1	57	2	42	3	27
10	25	2	00	2	45	3	30	4	15
11	26	2	48	3	33	4	18	5	3
12	27	3	36	4	21	5	6	5	51
13	28	4	24	5	9	5	54	6	39
14	29	5	12	5	57	6	42	7	27
15	30	6	00	6	45	7	30	8	15

The Moon's Age.		*Catneſs.* *Orkney* *Pool, S. Helen* *Fair Iſles.* H.	M.	*Needles* *Layſto* *Nor & South* *Forelands.* H.	M.	*Yarmouth* *Dover* *Harwich* *Carliſle* H.	M.	*Rye* *Goree* *Thames* *Winchelſea* H.	M.
1	16	9	48	10	33	11	18	12	3
2	17	10	36	11	21	12	6	12	51
3	18	11	24	12	9	12	54	1	39
4	19	12	12	12	57	1	42	2	27
5	20	1	00	1	45	2	30	3	15
6	21	1	48	2	33	3	18	4	3
7	22	2	36	3	21	4	6	4	51
8	23	3	24	4	9	4	54	5	39
9	24	4	12	4	57	5	42	6	27
10	25	5	00	5	45	6	30	7	15
11	26	5	48	6	33	7	18	8	3
12	27	6	36	7	21	8	6	8	51
13	28	7	24	8	9	8	54	9	39
14	29	8	12	8	57	9	42	10	27
15	30	9	00	9	45	10	30	11	15

A Table *of Expence.*

By the Day.		By the Week.			By Month, or 28 Days			By the 12th Part of a Year.				By the Year.			
Farthings		s	d	f.	s	d.	f	s.	d.	f.		l.	s.	d.	f.
	1	0	1	3	0	7	00	0	7	2		0	7	7	1
	2	0	3	2	1	2	00	1	3	0		0	15	2	2
	3	0	5	1	1	9	00	1	10	3		1	2	9	3
Pence		l.	s.	d.	l.	s.	d.	l.	s.	d.	f.	l.	s.	d.	
	1	0	0	7	0	2	4	0	2	6	1	1	10	05	
	2	0	1	2	0	4	8	0	5	0	3	3	00	10	
	3	0	1	9	0	7	0	0	7	7	1	4	11	03	
	4	0	2	4	0	9	4	0	10	1	2	6	01	08	
	5	0	2	11	0	11	8	0	12	8	0	7	12	01	
	6	0	3	6	0	14	0	0	15	2	2	9	02	06	
	7	0	4	1	0	16	4	0	17	8	3	10	12	11	
	8	0	4	8	0	18	8	1	0	1	3	12	03	05	
	9	0	5	3	1	1	0	1	2	9	3	13	13	09	
	10	0	5	10	1	3	4	1	5	4	0	15	04	02	
	11	0	6	5	1	5	8	1	7	10	2	16	14	07	
Shillings	1	0	7	0	1	8	0	1	10	5	0	18	05	0	
	2	0	14	0	2	16	0	3	0	10	0	36	10	0	
	3	1	1	0	4	4	0	4	11	3	0	54	15	0	
	4	1	8	0	5	12	0	6	1	8	0	73	00	0	
	5	1	15	0	7	0	0	7	12	1	0	91	05	0	
	6	2	2	0	8	8	0	9	2	6	0	109	10	0	
	7	2	9	0	9	16	0	10	8	3	0	127	15	0	
	8	2	16	0	11	4	0	12	3	6	0	146	00	0	
	9	3	3	0	12	12	0	13	8	5	0	164	05	0	
	10	3	10	0	14	0	0	15	4	2	0	182	10	0	
	11	3	17	0	15	8	0	16	9	3	0	200	15	0	
	12	4	4	0	16	16	0	18	8	5	0	219	00	0	
	13	4	11	0	18	4	0	19	15	5	0	237	05	0	
	14	4	18	0	19	12	0	21	6	10	0	255	10	0	
	15	5	5	0	21	0	0	22	6	3	0	273	15	0	
	16	5	12	0	22	8	0	24	6	8	0	292	00	0	
	17	5	19	0	23	16	0	25	6	3	0	310	05	0	
	18	6	6	0	25	4	0	27	7	6	0	328	10	0	
	19	6	13	0	26	12	0	28	7	11	0	346	15	0	
	20	7	0	0	28	0	0	30	8	4	0	365	00	0	

A Table *of Expence.*

By the Year.	*By the Month, or 28 Days.*				*By Month, or 12th Pt. of the Year*			*By the Week.*				*By theDay*			
l.	*l.*	*s.*	*d*	*f*	*l*	*s.*	*d.*	*l.*	*s.*	*d.*	*f.*	*l.*	*s.*	*d.*	*f.*
1	0	1	6	2	0	1	8	0	0	04	2	0	0	00	3
2	0	3	1	0	0	3	4	0	0	09	1	0	0	01	1
3	0	4	7	2	0	5	0	0	1	01	3	0	0	02	0
4	0	6	1	3	0	6	8	0	1	06	2	0	0	02	3
5	0	7	8	1	0	8	4	0	1	11	0	0	0	03	1
6	0	9	2	3	0	10	0	0	2	03	3	0	0	04	0
7	0	10	9	1	0	11	8	0	2	08	1	0	0	04	2
8	0	12	3	3	0	13	4	0	3	01	0	0	0	05	1
9	0	13	10	1	0	15	0	0	3	05	2	0	0	09	0
10	0	15	4	2	0	16	8	0	3	10	1	0	0	06	2
11	0	16	11	0	0	18	4	0	4	02	3	0	0	07	1
12	0	18	5	2	1	00	0	0	4	07	2	0	0	07	3
13	1	0	0	0	1	01	8	0	5	00	0	0	0	08	2
14	1	1	6	2	1	03	4	0	5	04	2	0	0	09	1
15	1	3	2	0	1	05	0	0	5	09	1	0	0	09	3
16	1	4	7	2	1	06	8	0	6	01	3	0	0	10	2
17	1	6	1	3	1	08	4	0	6	06	2	0	0	11	1
18	1	7	8	1	1	10	0	0	6	11	0	0	0	11	3
19	1	9	2	3	1	11	8	0	7	03	3	0	1	00	2
20	1	10	9	1	1	13	4	0	7	08	1	0	1	01	1
30	2	6	1	3	2	10	0	0	11	06	2	0	1	07	3
40	3	1	6	2	3	06	8	0	15	04	2	0	2	02	1
50	3	16	11	0	4	03	4	0	19	02	3	0	2	08	3
60	4	12	3	3	5	00	0	1	3	01	0	0	3	03	2
70	5	7	8	1	5	16	8	1	6	11	0	0	3	10	0
80	6	3	1	0	6	13	4	1	10	09	1	0	4	04	2
90	6	18	5	1	7	10	0	1	14	07	2	0	4	11	1
100	7	13	10	1	8	06	8	1	18	05	2	0	5	05	3
200	15	7	8	1	16	13	4	3	16	11	1	0	10	11	2
300	23	1	6	2	25	00	0	5	15	04	3	0	16	05	1
400	30.	15	4	3	33	06	8	7	13	10	1	1	01	11	0
500	38	9	2	1	41	13	4	9	12	03	3	1	07	04	3
1000	76.	18	5	1	83	06	8	19	04	07	3	2	14	09	2

A Table *of the Kings of* Scotland, *and their Reigns from* Fergus I. *to King* James *the Sixth, and Firſt of* England.

No.	*Kings Names.*	*Began to reign*	*R. Years*	No.	*Kings Names.*	*Began to reign*	*R. Years*
	Before Chriſt.					*A.D.*	
1	Fergus I.	330	25	25	Ethodius I.	132	62
2	Feritharis	305	15	26	Satrael	194	3
3	Mainus	290	29	27	Donald I.	197	21
4	Dornadilla	261	28	28	Ethodius II.	218	13
5	Nothatus	233	20	29	Athirco	221	21
6	Reuther	213	26	30	Nathalacus	242	11
7	Reutha	187	14	31	Findochus	253	9
8	Thereus	173	12	32	Donald II.	262	1
9	Joſina	161	24	33	Donald III.	263	10
10	Fennanas	137	30	34	Crathilinthus	273	36
11	Durſtus	107	9	35	Fincomarcus	309	47
12	Evenus I.	98	19	36	Romacus	356	5
13	Gillus	79	2	37	Anguſianus	361	2
14	Evenus II.	77	17	38	Fethelmalcus	363	6
15	Ederus	60	48	39	Eugene I.	369	10
16	Evenus III.	13	6	40	Fergus II.	422	16
17	Metellanus	7	39	41	Eugene II.	438	22
				42	Dongardus	460	5
	After Chriſt's Birth.			43	Conſtantine I.	465	17
				44	Congalus I.	482	20
				45	Goranus	501	34
18	Caractacus	29	21	46	Eugene III.	533	33
19	Corbredus I.	53	18	47	Congallus II.	568	10
20	Dardanus	71	4	48	Kinnatellus	578	1
21	Corbredus II.	75	30	49	Aidanus	579	27
22	Luctacus	105	3	50	Kennethus I.	606	½
23	Mogaldus	108	36	51	Eugene IV.	606	14
24	Conaru[illegible]	144	18	52	Ferquhardus	620	12

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The Table *of the Kings of* Scotland *continued.*

No.	*Kings Names.*	*Began to reign*	*R Years*
53	Donald IV.	632	14
54	Ferquardus II.	646	12
55	Malduinus	664	20
56	Eugene V.	684	4
57	Eugene VI.	688	9
58	Amberkeleth	697	2
59	Eugene VII.	699	7
60	Mordacus	716	16
61	Ethfinus	732	30
62	Eugene VIII.	762	3
63	Fergus III.	765	3
64	Salvathius	768	20
65	Achaius	788	31
66	Congallus III.	819	5
67	Dongallus	824	6
68	Alpinus	830	4
69	Kennethus II.	834	20
70	Donald V.	855	5
71	Conſtantin. II.	860	13
72	Ethus	874	1
73	Gregory	875	18
74	Donald VI.	893	10
75	Conſtantin III.	903	4
76	Malcolm I.	943	15
77	Induphus	959	9
78	Duffus	968	4
79	Culenus	972	5
80	Kennethus III	977	23
81	Conſtantin. IV	1000	2
82	Grimus	1002	10
83	Malcolm II.	1012	30
84	Duncan I.	1040	6
85	Macbeth	1046	17
86	Malcolm III.	1063	33
87	Donald VII.	1096	½
88	Duncan II.	1099	1
89	Edgar	1101	9
90	Alexander I.	1110	13
91	David I.	1123	29
92	Malcolm IV.	1152	10
93	William	1162	49
94	Alexander II.	1214	35
95	Alexander III	1249	34
96	John Baliol	1283	5
97	Rob. Bruce	1306	23
98	David II.	1329	2
99	Ed. Baliol	1332	38
100	Robert II.	1370	19
101	Robert III.	1389	14
102	James I.	1424	13
103	James II.	1437	23
104	James III.	1460	29
105	James IV.	1489	25
106	James V.	1514	29
107	H.& M.Stuart	1543	24
108	James VI.	1567	35

A Table *of the Kings of* England, *and their* Reigns, *from* Egbert, *the firſt King, to his preſent Majeſty King* George II.

N.°	*Kings Names.*	*Began to Reign* *A.D.*	*R. Years*
1	EGbert	819	17
2	Ethelwole	836	19
3	Ethelbald	855	5
4	Ethelbert	860	6
5	Ethelred	866	6
6	Alfred	872	29
7	Ed. the Elder	901	23
8	Ethelſtan	924	16
9	Edmund	940	6
10	Eldred	946	9
11	Edwin	955	4
12	Edgar	959	16
13	Edw. *Martyr.*	175	3
14	Ethelred II.	978	38
15	Edm. Ironſide	1016	1
16	Canute	1017	18
17	Harold	1035	5
18	Hardicanute	1040	2
19	Edw. *Confeſſor*	1042	24
20	Harold 2.	1066	1
21	W. *Conqueror.*	1067	21
22	W. Rufus	1087	13
23	Henry 1.	1100	35
24	Stephen	1135	19
25	Henry 2.	1154	35
26	Richard 1.	1189	10
27	John	1199	17
28	Henry 3.	1216	56
29	Edward 1.	1272	35
30	Edward 2.	1307	20
31	Edward 3.	1327	50
32	Richard 2.	1377	22
33	Henry 4.	1399	13
34	Henry 5.	1412	10
35	Henry 6.	1422	39
36	Edward 4.	1461	22
27	Edward 5.	1483	00
38	Richard 3.	1483	2
39	Henry 7.	1485	23
40	Henry 8.	1509	37
41	Edward 6.	1546	7
42	Mary 1.	1553	5
43	Elizabeth	1558	44

KINGS and QUEENS of Great-Britain.

No.	*NAMES*	*Began to Reign*			*Reign'd Y. M.*
1	James 1.	1602	Mar.	24	23
2	Charles 1	1625	Mar.	27	22.10
3	Charles 2.	1648	Jan.	30	36
4	James 2.	1684	Feb.	6	4
5 6	William 3. Mary 2.	1688	Feb.	13	13
7	Anne	1701	Mar.	8	13
8	George 1.	1714	Aug.	1	12.10
9	George 2.	1727	June	11	
	Crown'd	*October*		11	

Note, In the Beginning of the Table of the Kings of *Scotland*, the 1ſt Column ſhews the Year before Chriſt, till you come to the 17th King, *Metelanus*; in the 7th Year of whoſe Reign our Saviour was Born. *Caractacus* ſucceeded in the 29th Year of our Lord, &c.

Fergus the firſt King of *Scotland* began his Reign 330 before Chriſt, and reigned 25 Years. See the Table.

James IV. of *Scotland* married *Margaret*, eldeſt Daughter to Henry 7th of *England*, Grandmother to *James* VI. who was the Son of *Henry Stuart*, Duke of *Albany*, &c. and of *Mary Stuart*, Queen of *Scots*.

He was Crown'd King of *Scotland* the 2d Year of his Age; and the 35th Year of his Reign the Crown of *England* fell to him by the Death of Queen *Elizabeth*. He reign'd 23 Years in *England*, in all 57.

The Elector *Palatine* of the *Rhine*, (afterwards King of *Boheme*) married Princeſs *Eliz.* His eldeſt Daughter, by whom he had Princeſs *Sophia*; his late Majeſty's Mother, King *George* I.

After

After the *Romans* quitted *England*, rhe *Saxons* divided it into Seven Kingdoms, *viz.*

1. *Kent*, became a Kingdom in the Year of Chriſt 455.

2. The Kingdom of the *South Saxons* contain'd *Suſſex* and *Surrey* in 488.

3. The Kingdom of the *Weſt Saxons*, contain'd *Cornwall*, *Devon*, *Dorſet*, *Somerſet*, *Wilts*, *Hants*, *Berks*, *Lancaſter*, in 522.

4. The Kingdom of the *Eaſt Angles*, comprehended *Norfolk*, *Suffolk*, *Cambridge* and the Iſle of *Ely*, in 527.

5. The Kingdom of the *Eaſt Saxons*, *Eſſex*, *Middleſex*, and Part of *Hertfordſhire*, in 527.

6. The Kingdom of *Northumberland*, *York*, *Durham*, *Cumberland* and *Weſtmorland*, in 549.

7. Kingdom of *Merica* contain'd *Glouceſter*, *Hereford*, *Worceſter*, *Warwick*, *Leiceſter*, *Rutland*, *Lincoln*, *Huntington*, *Bedford*, *Buckingham*, *Oxford*, *Stafford*, *Nottingham*, *Cheſter*, and the other Part of *Hertfordſhire*, in 582.

Egbert was King of the *Weſt Saxons*; he conquer'd the other Kings, put an end to the Heptarchy, and began the Monarchy of *England*.

Canute the 16th King, was the firſt Daniſh King. 19. The *Saxon* Line reſtored in the Perſon of *Edward* the Confeſſor. 21 *W.* the Conqueror, firſt *Norman* King. 25 The *Norman* and *Saxon* Lines united in the Perſon of *Hen.* 2. 33 Firſt King of the Line of *Lancaſter*, call'd the *Red Roſe*, *Hen.* IV. 36 Firſt King of the Line of *York*, call'd the *White Roſe*, *Edward* 4. 39 *Lancaſter* and *York* united in the Perſon of *Henry* VII.

A Short Diſcription of TIME.

And the true Way of Redeeming it.

TIME may be defined to be a certain Paſſage of Eternity, comprehended between the Creation and the Day of Judgment; in which God executes his Wiſe Purpoſes, and Eternal Decrees concerning this ſublunary World: For when the Seventh Angel ſounds, time ſhall be no more.

TIME is the Seaſon in which we Mortals are to Act upon the Stage of Life, in the Sight of our all-ſeeing Creator! And according to our Acting, and Behaviour before Him, He will reward us with unconceivable Felicity and Bliſs in his immediate Preſence! Or puniſh us with Eternal Torment and Miſery! Forever to be excluded from all hopes of recovering his Favour.

Therefore it concerns every one of us, to make the beſt of our Time, and not trifle it away upon Vanity and Toys, that will not avail us any thing, when we are call'd to give up our Accounts at the End of Time.

I.

IN Thoughts, in Deeds, in Words and Rhime,
Let us redeem our precious Time,
For Time is ſwift, and will not ſtay;
A Minutes's ours, we cannot ſay,
The Time that's paſt, who can recall?
And future Time is not at all,

The preſent Time is only ours
Let's manage it with all our Pow'rs.

II.

Why ſhould we ſpend our Time in Play,
When this may be our final Day ?
Our preſent Moment ſlides like Sand,
The next, the Wheels of Time may ſtand !
At leaſt, our Time may ſoon be run,
And long Eternity begun ;
There's no Devices in the Grave,
And no Repentance then will ſave.

III.

But how preſumptuous they are,
Who ſay, they have an Hour to ſpare ?
For Death may call that Hour his own,
And ſend them packing with a Frown.
All things beſides we've more profuſe,
To teach us, Time with Care to uſe ;
Yet flying Time we thus miſpend,
And never think upon our End.

IV.

O heedleſs Man ! Improve thy Time,
And truſt not Future in thy Prime ;
For Time's the Seaſon in which we may
Procure eternal Bliſs for ay ;
Procure a Treaſure beyond Time,
Where Thieves and Moths can never climb ;
But here we may be robb'd of all,
And from the higheſt Honour fall.

V.

V.

This may ſuffice us as a Hint,
What by redeeming Time is meant.
We firſt muſt lay it out with Skill,
And ſtrive to do our Maker's Will:
Love God, and Man, and our own Souls,
Without ſuch Love we're empty Fools;
And God muſt have our chiefeſt Love,
The Father, Son, and Holy Dove.

VI.

Love each other, as Chriſt lov'd us!
Give, and forgive, and bear his Croſs;
We muſt e're long our Souls reſtore,
To him who gave them us before;
Let's pray to Chriſt to waſh them clean
In his dear Blood from ev'ry Sin,
From ev'ry Stain they gather'd here,
And thro' his Merits make them clear.

VII.

We muſt put on his Righteouſneſs,
And our Unworthineſs confeſs;
Yet if our Love's true and ſincere,
He'll give us Grace, diſpell our Fear,
And at the end, eternal Joys,
All Earthly things are worthleſs Toys:
Lord, while we are here, give us Peace,
And guide us thro' our mortal Race.

VIII.

I'll reckon with my God in Time,
I'll fix my Thoughts on things ſublime!
What Debts I cannot pay with eaſe,
In Love, in Thanks, in Songs of Praiſe,
My God will freely them forgive,
Thro' Chriſt, who dy'd, that I might live!
I will not ſet my Heart on Toys,
Which end with Time, and yield no Joys.

IX.

Help me, dear Lord, to live upright,
And do my Work while I have Light,
At Death reſign my Soul to thee,
And thro' Chriſt's Merits be made free;
Made a free Citizen above,
Heir of Glory, Peace, Joy and Love!
Co-heir with Chriſt, our Lord and King,
Let Heav'n and Earth his Praiſes ſing.

X.

Theſe are the happy Fruits of Time;
How Glorious, and how Sublime!
Who would not then live holy here,
And their Short Courſe with Wiſdom ſteer?
But as for me, I'll praiſe the Lord;
I'll fear his Threats, and truſt his Word;
There's time enough, and none to ſpare,
For ev'ry Purpoſe and Affair.

FINIS.

B L